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Survey of Innovation 1999
Statistical Tables
Manufacturing Industries, Canada

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Survey of Innovation 1999

Statistical Tables
Manufacturing Industries
Canada

Science, Innovation and Electronic Information Division
Statistics Canada

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This set of statistical tables is the result of a collaborative project between the Science, Innovation and Electronic Information Division, Statistics Canada, Industry Canada, Natural Resources Canada and the National Research Council of Canada

Working Papers

The Working Papers publish research related to science and technology issues. All papers are subject to internal review. The views expressed in the articles are those of the authors and do not necessarily reflect the views of Statistics Canada nor, in this case, the views of Industry Canada, Natural Resources Canada or the National Research Council of Canada.

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An Information System for Science and Technology Statistics Project

The purpose of this Project is to develop **useful indicators of science and technology activity** in Canada based on a framework that ties them together into a coherent picture. To achieve the purpose, statistical indicators are being developed for five key entities:

- **Actors**: persons and institutions engaged in S&T activities. Measures include distinguishing R&D performers, identifying universities that license their technologies, and determining the field of study of graduates.
- **Activities**: the creation, transmission or use of S&T knowledge including research and development, innovation, and use of technologies.
- **Linkages**: the means by which S&T knowledge is transferred among actors. Measures include the flow of graduates to industries, the licensing of a university's technology to a company, co-authorship of scientific papers, and the source of ideas for innovation in industry.
- **Outcomes**: the medium-term consequences of activities. Outcomes of an innovation in a firm may be improved productivity, improved product quality and/or more highly skilled jobs. An outcome of a firm adopting a new technology may be a greater market share for that firm.
- **Impacts**: the longer-term consequences of activities, linkages and outcomes. Wireless telephony is the result of many activities, linkages and outcomes. It has wide-ranging economic and social impacts such as increased connectedness.

The development of these indicators and their further elaboration is being done at Statistics Canada, in collaboration with other government departments and agencies, and a network of contractors.

Prior to the start of this work, the ongoing measurements of S&T activities were limited to information and data on the investment of money and human resources in research and development (R&D). For governments, there were also measures of related scientific activity (RSA) such as surveys and routine testing. These measures presented a narrow picture of science and technology in Canada. More measures were needed to improve the picture.

Innovation makes firms competitive and we are continuing with our efforts to understand the characteristics of innovative and non-innovative firms, especially in the service sector that dominates the Canadian Economy. The capacity to innovate resides in people and measures are being developed of the characteristics of people in those industries that lead science and technology activity. In these same industries, measures are being made of the creation and the loss of jobs as part of understanding the impact of technological change.

The federal government is a principal player in science and technology where it invests over $5 billion dollars each year. In the past, it has been possible to say only *how much* the federal government spends and *where* it spends it. Our report **Federal Scientific Activities, 1998 (Cat. No. 88-204)** first published indicators by socio-economic objectives to show *what* the S&T money was spent on. As well as offering a basis for a public debate on the priorities of government spending, all of this information has been used to provide a context for performance reports of individual departments and agencies.

As of April 1999, the Information System for Science and Technology Statistics Project has been established as a part of Statistics Canada's Science, Innovation and Electronic Information Division.

The final version of the framework that guides the future elaboration of indicators was published in December, 1998 (**Science and Technology Activities and Impacts: A Framework for a Statistical Information System,** Cat. No. 88-522). The framework has given rise to **A Five-Year Strategic Plan for the Development of an Information System for Science and Technology** (Cat. No. 88-523).

It is now possible to report on the Canadian system on science and technology and show the role of the federal government in that system.

Our working papers and research papers are available at no cost on the Statistics Canada Internet site at http://www.statcan.ca/cgi-bin/downpub/research.cgi?subject=193.

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The Survey of Innovation 1999 was a collaborative project with contributions from Industry Canada, Natural Resources Canada and the Institute for Research in Construction of the National Research Council of Canada, with the participation of the Canadian Construction Research Board.

The testing of the questionnaire was done by Statistics Canada's Questionnaire Design Resource Centre and was carried out by Allan Gower, Marie-Josée Williams and Anna Paletta.

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Preface

This is the first in a series of sets of statistical tables that will present the results from the Survey of Innovation 1999. This set presents results for manufacturing industries at the Canada level. A subsequent set of tables will present national statistical tables for selected natural resource industries. Two working papers have been published examining national estimates of innovation in manufacturing. The first working paper examines national estimates while the second examines provincial estimates of innovation in manufacturing. Subsequent papers will include an examination of innovation in selected natural resource industries at the national level and at the provincial level. Research papers will follow these working papers.

Innovation is vital to economic growth and development. It is through innovation that new products are introduced to the market, new production processes are developed and introduced and organizational changes are made.

The Survey of Innovation 1999 surveyed the manufacturing sector and was the first innovation survey of selected natural resource industries. Statistics Canada has conducted several surveys of innovation since 1993 to better understand innovation in Canada. The 1993 Survey of Innovation and Advanced Technology surveyed manufacturing firms. The Survey of Innovation 1996 surveyed the communications, financial services and technical business services industries. The 1998 Advanced Technologies in Canadian Manufacturing Survey explored technology adoption of all manufacturing industries except for food. The 1999 Survey of Innovation, Advanced Technologies and Practices in the Construction and Related Industries was the first survey of advanced technologies and practices in the construction sector.

The 1999 Survey of Innovation provided an opportunity to supplement the study of Innovation, Advanced Technologies and Practices in the Construction and Related Industries and to examine the relationship between construction and manufacturing. To explore this relationship, questions were added to the 1999 Survey of Innovation to explore manufacturing and natural resource suppliers to the construction industry. A question on the proportion of sales products used by selected natural resource industries was also included.

The information compiled from the Survey of Innovation can be used by firms for market analysis, by trade associations to study performance and other characteristics of their industries, and by government to develop national and regional economic policies.

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Introduction

This is the first of two sets of statistical tables that results from a collaborative project between the Science, Innovation and Electronic Information Division of Statistics Canada, Industry Canada, Natural Resources Canada and the Institute for Research in Construction of the National Research Council of Canada, with the participation of the Canadian Construction Research Board. The objective of the project is to provide information on innovation and related activities with an ultimate view to its use in developing policies and programs. These tables present the characteristics of innovative manufacturing firms in Canada based on results from the Survey of Innovation 1999.

What is innovation?

The Oslo Manual[1] outlines proposed guidelines for collecting and interpreting innovation data. This manual identifies two types of innovation – product and process. In the case of product innovation, the product must have been introduced to the market. A process innovation must have been used within the production process. An innovative firm is one that has offered a new or significantly improved product or introduced a new or significantly improved production/manufacturing process during the last three years.

The term "product" includes both goods and services as innovation outputs. Product innovations can be broken down into "new" or "significantly improved" categories. A new product is one that is new to the firm, whose characteristics or intended uses differ significantly from those products previously produced by the firm. A significantly improved product is an existing product whose performance has been significantly enhanced or upgraded. A complex product consisting of a number of components or integrated subsystems may be improved by partial changes to one of the components or subsystems. Changes to a firm's existing products which are purely aesthetic or which only involve minor modifications are not considered to be innovations.

New production/manufacturing processes are those which are new to the firm. They involve the introduction of new production/manufacturing methods, procedures, systems, machinery or equipment into the firm. These must differ significantly from the firm's previous processes. Significantly improved production/manufacturing processes involve significant changes to existing processes which may be intended to produce new or significantly improved products or processes. Minor or routine changes to processes are not considered to be innovations.

Innovations may be oriented towards product, process or both product and process. By definition, an innovation must necessarily be a firm first; however, the degree of novelty may vary. An innovation may involve a major breakthrough discovery that is a first in the world or it can be an innovation that is a first in Canada.

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[1] OECD/Eurostat, 1997. Proposed Guidelines for Collecting and Interpreting Technological Innovation Data (Oslo Manual), Paris.

How does innovation take place?

Innovation and innovative activities may be carried out within the firm or may involve the acquisition of goods, services or knowledge from outside sources. The process of innovation can be assisted by a variety of sources of information including internal sources (within the firm), external market sources, educational and research institutions, and generally available information. Collaborations are one means by which innovation can occur through joint efforts from both inside and outside the firm.

There are numerous sources of information that can play a role in suggesting or contributing to innovation. Within a firm, R&D staff, marketing staff, production staff and management staff are all potential sources. Interactions with related firms in the corporate group (e.g. parent or subsidiary), suppliers of equipment, material and components, clients, consultancy firms, universities and colleges, federal or provincial agencies and research laboratories, and even clients can be an external source of information. Trade fairs and exhibitions, the Internet or computer based information networks, professional conferences, meetings and publications are all sources of information that are generally available to a firm.

Innovative firms can undertake a variety of activities linked to offering or introducing new or significantly improved products or processes. These include R&D, the acquisition of technology, or the acquisition of machinery and equipment with improved technological performance connected to firm innovation, activities in the preparations for production such as industrial engineering and industrial design, tooling up and production start-up, and training linked to innovation.

Cooperative and collaborative arrangements involve the active participation in joint projects between a firm and other firms or organizations for the purpose of innovation. Pure contracting-out work, where there is no active participation, is not regarded as collaboration or cooperation. The reasons for these arrangements can be related to financial considerations (sharing costs, spreading risk), access to knowledge (R&D, critical expertise), prototype development, scaling-up production processes, accessing new markets and accessing new distribution channels.

An innovative firm can take steps to protect the intellectual property on which its innovations are based. Patents, trademarks, copyrights, confidentiality agreements or trade secrets are some of the methods that can be used by a firm to protect intellectual property.

Why do firms innovate?

The objectives of innovation can be related to productivity, product or some other motivation. The reduction of labour costs, increase in production capacity, reduction of production time and improvements to production flexibility are all productivity motivations. The extension of product range, improvement to product quality, increasing the speed of delivering products to the market and the replacement of products that are being phased out are some objectives related to the product. Other objectives of innovation include the reduction of materials consumption, reduction of environmental damage, reduction of energy consumption, and dealing with or responding to new government regulations.

What are the factors affecting innovation?

The identification of obstacles to innovation is significant to policy development since many government measures are an attempt to overcome these. Various aspects of public policy can be better understood through an examination of a firm's perception of obstacles to innovation. Two key areas are dealt within this working paper - obstacles in general and government support programs.

There are many possible factors that can slow down or cause problems for firms when they innovate. High costs, the inability to devote staff to innovation projects on an on-going bases because of production requirements, or the inability to qualify for government assistance programs or R&D tax credits are a few. A lack of one or more of the following inputs to innovation can also present obstacles: skilled personnel, financing, marketing capability, information on relevant technology, required external technical support services, access to expertise in universities and/or government laboratories for assistance, cooperation with other firms, customer responsiveness to new products. Organizational rigidities within the firm can hinder innovation and government regulations can affect innovation capability.

Public policy can provide incentives for innovation. Government support programs include R&D tax credits, R&D grants, venture capital support, technology support and assistance, information or Internet services, and support for training. Failure to qualify for these programs can be an obstacle to innovation.

What is the result of innovation?

There are a variety of approaches to assessing the effect of innovation on a firm. The proportion of sales from new or significantly improved products is one measure of impact. Innovation can also impact to varying degrees on productivity, profitability, speed of supplying and/or delivering products, and the ability to adapt flexibly to different client demands. Other results of innovation can be an increase in domestic market share, increase in international market share, maintenance of profit margins, and keeping up with competitors. Finally, there can be an effect on human resources, where the number of employees in a firm may increase, decrease or remain the same.

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The Survey

Questionnaire development

The questionnaire (Annex 1) was designed by the Science, Innovation and Electronic Information Division of Statistics Canada in collaboration with Industry Canada, the Institute for Research in Construction of the National Research Council of Canada and Natural Resources Canada. Statistics Canada carried out interviews with individual firms in both official languages to ensure that the questions were well understood. Feedback from respondents was incorporated into the questionnaire design.

Characteristics and Coverage

Statistics Canada conducted the Survey of Innovation 1999 from October to December 1999 with the first data release of preliminary estimates on January 31, 2000.

The questionnaire consisted of thirteen sections with questions on competitive environment; firm success factors; new and significantly improved products and processes; sources of information; objectives; problems and obstacles; impact; cooperative and collaborative arrangements; most important new or significantly improved product or process; building and construction products; natural resource products; research and development, intellectual property and human resources; and government support programs.

Sampling Methodology

The target population was all firms in the manufacturing sectors (NAICS 31-33[2]) or in selected natural resource industries (NAICS 1133, 212, 2211) based on a list of businesses compiled from respondents to existing production surveys conducted by Manufacturing, Construction and Energy Division (MCED) at Statistics Canada and Natural Resources Canada. This paper will present the survey results for manufacturing industries at the national level. A complementary paper will present the results for the selected natural resource industries.

A total of 9,303 sample units were defined for the manufacturing industries from respondents to the Annual Survey of Manufactures. The sampling unit was neither at the enterprise nor the establishment level, but rather, it was a grouping (or cluster) of establishments. Within each province for each enterprise, all establishments of the same NAICS 4-digit code were grouped to form one sampling unit or "provincial enterprise". To reduce response burden, provincial enterprises with revenues of less than $250,000 were not included in the population and neither were those with less than 20 employees.

The sample was randomly drawn from the population of provincial enterprises stratified by province. Thirty-one industry groups for manufacturing based on NAICS codes were used. Details of the industry codes used and the population for the survey are found in Table A with the sample size shown in Table B.

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[2] Statistics Canada, 1998. North American Industry Classification System - NAICS Canada, Statistics Canada Catalogue No. 12-501-XPE.

Table A. Population, Manufacturing Industries, Survey of Innovation 1999

Stratum Number	NAICS	Description	NF	PE	NS	NB	QC	ON	MB	SK	AB	BC	YT	NT	Total
7	311	Food Manufacturing	29	18	50	46	294	203	34	22	70	90	0	0	856
8	312	Beverage and Tobacco Product Manufacturing	3	2	5	6	32	22	3	3	10	13	0	0	99
9	313	Textile Mills	0	0	4	4	115	44	5	0	0	2	0	0	174
10	314	Textile Product Mills	0	1	5	2	55	46	7	2	9	12	0	0	139
11	315	Clothing Manufacturing	0	0	4	8	380	104	21	5	13	36	0	0	571
12	316	Leather and Allied Product Manufacturing	1	0	1	2	45	17	4	1	4	5	0	0	80
13	3211	Sawmills and Wood Preservation	6	2	16	15	133	25	5	6	14	67	0	1	290
14	3212	Veneer, Plywood and Engineered Wood Product Manufacturing	0	0	3	7	37	24	3	3	14	26	0	0	117
15	3219	Other Wood Product Manufacturing	0	1	5	8	125	81	7	3	22	53	0	0	305
16	322	Paper Manufacturing	4	1	8	14	106	100	11	4	16	35	0	0	299
17	323	Printing and Related Support Activities	1	1	12	7	189	233	27	9	46	73	0	0	598
18	324	Petroleum and Coal Products Manufacturing	1	0	3	3	13	16	3	3	8	7	0	0	57
19	3251 + 3252 + 3253 + 3255 + 3256 + 3259	Basic Chemical Manufacturing + Resin, Synthetic Rubber, and Artificial and Synthetic Fibres and Filaments Manufacturing + Pesticide, Fertilizer and Other Agricultural Chemical Manufacturing + Paint, Coating and Adhesive Manufacturing + Soap, Cleaning Compound and Toilet Preparation Manufacturing + Other Chemical Product Manufacturing	1	3	3	8	153	162	13	7	39	29	0	0	418
20	3254	Pharmaceutical and Medicine Manufacturing	0	1	1	0	33	20	2	1	1	3	0	0	62
21	326	Plastics and Rubber Products Manufacturing	3	0	9	10	218	213	20	5	33	55	0	0	566
22	327	Non-Metallic Mineral Products Manufacturing	7	2	15	15	116	114	13	9	30	57	0	0	378
23	331	Primary Metal Manufacturing	0	1	2	3	73	92	15	4	16	21	0	0	227
24	332	Fabricated Metal Product Manufacturing	5	3	13	17	389	521	41	23	127	122	0	0	1261
25	3331 + 3332	Agricultural, Construction and Mining Machinery Manufacturing + Industrial Machinery Manufacturing	0	1	2	4	87	62	9	17	40	22	0	0	244
26	3333 + 3334 + 3335 + 3336 + 3339	Commercial and Service Industry Machinery Manufacturing + Ventilation, Heating, Air-Conditioning and Commercial Refrigeration Equipment Manufacturing + Metalworking Machinery Manufacturing + Engine, Turbine, and Power Transmission Equipment Manufacturing + Other General Purpose Machinery Manufacturing	0	1	6	3	190	322	17	10	39	43	0	0	631
27	3341	Computer and Peripheral Equipment Manufacturing	0	0	0	0	19	16	3	1	0	7	0	0	46
28	3342	Communications Equipment Manufacturing	1	0	0	1	27	21	2	0	7	9	0	0	68
29	3343	Audio and Video Equipment Manufacturing	0	0	0	0	0	6	0	0	0	0	0	0	6
30	3344	Semiconductor and other Electronic Equipment Manufacturing	0	0	1	1	24	19	0	0	3	4	0	0	52
31	3345 + 3346	Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Equipment	1	0	4	1	49	51	4	2	10	13	0	0	135
32	335	Electrical Equipment, Appliance and Component Manufacturing	0	0	4	1	84	95	4	3	12	19	0	0	222
33	3361+ 3362 + 3363	Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	0	0	6	3	68	168	14	6	25	34	0	0	324
34	3364	Aerospace Product and Parts Manufacturing	0	3	3	0	30	22	4	0	3	7	0	0	72
35	3365 + 3366 + 3369	Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment Manufacturing	2	1	9	1	22	19	2	1	0	23	0	0	80
36	337	Furniture and Related Product Manufacturing	1	1	3	8	219	153	18	6	44	47	0	0	500
37	339	Miscellaneous Manufacturing	3	0	9	8	140	160	14	4	35	52	0	1	426
	Total, Manufacturing Industries		**69**	**43**	**206**	**206**	**3465**	**3,151**	**325**	**160**	**690**	**986**	**0**	**2**	**9,303**

Table B. Sample, Manufacturing Industries, Survey of Innovation 1999

Stratum Number	NAICS	Description	NF	PE	NS	NB	QC	ON	MB	SK	AB	BC	YT	NT	Total
7	311	Food Manufacturing	17	18	17	17	246	94	17	22	52	62	0	0	562
8	312	Beverage and Tobacco Product Manufacturing	3	2	5	6	28	20	3	3	9	13	0	0	92
9	313	Textile Mills	0	0	3	4	94	33	4	0	0	1	0	0	139
10	314	Textile Product Mills	0	1	2	2	38	28	5	2	2	10	0	0	90
11	315	Clothing Manufacturing	0	0	3	6	232	66	14	5	7	31	0	0	364
12	316	Leather and Allied Product Manufacturing	1	0	1	1	35	12	2	1	2	3	0	0	58
13	3211	Sawmills and Wood Preservation	4	2	15	15	103	24	5	6	14	51	0	1	240
14	3212	Veneer, Plywood and Engineered Wood Product Manufacturing	0	0	2	6	27	19	3	3	14	26	0	0	100
15	3219	Other Wood Product Manufacturing	0	1	4	5	84	43	6	3	17	41	0	0	204
16	322	Paper Manufacturing	4	1	8	14	96	65	10	4	16	35	0	0	253
17	323	Printing and Related Support Activities	1	1	7	6	82	75	24	8	24	47	0	0	275
18	324	Petroleum and Coal Products Manufacturing	1	0	3	3	13	16	2	3	8	7	0	0	56
19	3251 + 3252 + 3253 + 3255 + 3256 + 3259	Basic Chemical Manufacturing + Resin, Synthetic Rubber, and Artificial and Synthetic Fibres and Filaments Manufacturing + Pesticide, Fertilizer and Other Agricultural Chemical Manufacturing + Paint, Coating and Adhesive Manufacturing + Soap, Cleaning Compound and Toilet Preparation Manufacturing + Other Chemical Product Manufacturing	1	3	3	8	133	90	11	7	39	29	0	0	324
20	3254	Pharmaceutical and Medicine Manufacturing	0	1	1	0	28	20	2	1	1	3	0	0	57
21	326	Plastics and Rubber Products Manufacturing	3	0	9	10	148	100	20	5	33	43	0	0	371
22	327	Non-Metallic Mineral Products Manufacturing	7	2	13	15	90	60	11	8	26	44	0	0	276
23	331	Primary Metal Manufacturing	0	1	2	3	69	60	14	4	16	21	0	0	190
24	332	Fabricated Metal Product Manufacturing	4	3	8	15	224	120	15	15	67	71	0	0	542
25	3331 + 3332	Agricultural, Construction and Mining Machinery Manufacturing + Industrial Machinery Manufacturing	0	1	1	4	59	50	8	17	35	21	0	0	196
26	3333 + 3334 + 3335 + 3336 + 3339	Commercial and Service Industry Machinery Manufacturing + Ventilation, Heating, Air-Conditioning and Commercial Refrigeration Equipment Manufacturing + Metalworking Machinery Manufacturing + Engine, Turbine, and Power Transmission Equipment Manufacturing + Other General Purpose Machinery Manufacturing	0	1	4	3	121	100	12	9	35	34	0	0	319
27	3341	Computer and Peripheral Equipment Manufacturing	0	0	0	0	12	16	3	1	0	7	0	0	39
28	3342	Communications Equipment Manufacturing	1	0	0	1	21	21	2	0	5	9	0	0	60
29	3343	Audio and Video Equipment Manufacturing	0	0	0	0	0	6	0	0	0	0	0	0	6
30	3344	Semiconductor and other Electronic Equipment Manufacturing	0	0	1	1	18	19	0	0	3	4	0	0	46
31	3345 + 3346	Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Equipment	1	0	4	1	26	48	3	2	9	13	0	0	107
32	335	Electrical Equipment, Appliance and Component Manufacturing	0	0	4	1	68	57	4	3	11	19	0	0	167
33	3361 + 3362 + 3363	Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	0	0	4	3	47	87	12	6	17	33	0	0	209
34	3364	Aerospace Product and Parts Manufacturing	0	3	3	0	21	16	4	0	3	7	0	0	57
35	3365 + 3366 + 3369	Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment Manufacturing	2	1	4	1	19	10	1	1	0	19	0	0	58
36	337	Furniture and Related Product Manufacturing	1	1	3	7	116	70	9	4	31	33	0	0	275
37	339	Miscellaneous Manufacturing	1	0	6	5	84	60	5	3	13	34	0	1	212
		Total Manufacturing Industries	**52**	**43**	**140**	**163**	**2,382**	**1,505**	**231**	**146**	**509**	**771**	**0**	**2**	**5,944**

As part of a Federal-Provincial Agreement, the sample in Quebec was augmented. In total, a sample of 5944 provincial enterprises in manufacturing was drawn.

Data Collection

All sample units were contacted to determine the name and correct mailing address for respondent, the Chief Executive Officer (CEO) of the business or the person designated by the CEO. Questionnaires were mailed out with mail, telephone and fax follow ups carried out for non respondents.

Edit and Imputation

Validity and flow edits were built into the data capture system and were applied during data collection and data entry. Validity edits ensured that responses to particular questions fell within a limited range of possible values. Post collection consistency edits were applied to complete[3] questionnaires.

Imputation was used for non-response to non-mandatory questions on complete questionnaires. Donors were always from the same industry group or "stratum" as defined in Tables A and B. No individual record was used as a donor more than four times for any given question.

Response and Non-response

The response rate for the Survey of Innovation 1999 was calculated as the total number of completed questionnaires as a percentage of the total active, in-scope survey sample. The overall response rate for manufacturing industries was 95%, for a total of 5455 completed questionnaires.

Sampling Error

Answers to the survey questions presented in this report are population estimates; that is, they represent the percentage of businesses in the population that exhibit a particular characteristic. The population estimates are generated through the application of sample weights when tabulations are generated.

As the sample drawn for this survey is but one of many possible samples that could have been drawn, there is a sampling error attributed to it. Standard errors are used to provide a guide as to the reliability of the results. All estimates presented in the statistical tables in this paper have been evaluated and assessed for reliability using the following convention:

Code	Rating	Standard Error
A	Very good	≤2.5%
B	Good	>2.5% and ≤7.5%
C	Good to poor- use with caution	>7.5% and ≤15%
D	Very poor- too unreliable to be published	>15%

Symbols

The following standard symbols are used in this working paper:

...	figures not appropriate or not applicable
-	nil or zero
x	confidential to meet secrecy requirements of the Statistics Act

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[3] Complete questionnaires are those which have responses to questions 3, 4, 5, 6, 12, 21, 22 and 23.

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Interpretative Notes
Tables for Question 1

There are four tables for Question 1. Two tables are for all manufacturing (Tables 1.1 and 1.3) and two are for innovators in manufacturing (Tables 1.2 and 1.4). Two sort orders were adopted for each pair of tables for all manufacturing and innovators in manufacturing respectively. The first tables for each pair, Table 1.1 and Table 1.2, present competitive factor by industry whereas the second tables for each pair, Table 1.3 and Table 1.4 present industry by competitive factor.

The following contains an explanation of how to read these tables using Table 1.1 as an example.

For 'Total Manufacturing Industries' 97.6% of firms indicated their opinion on the statement "My client's demands are easy to predict". Of these:

- 7.8% strongly agreed;
- 23.8% disagreed;
- 36.4% were neutral;
- 24.6% agreed; and
- 7.5% strongly agreed with the statement.

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Table 1.1
Competitive Environment
Competitive Factor by Industry
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
My client's demands are easy to predict												
Total Manufacturing Industries	97.6	A	7.8	A	23.8	A	36.4	A	24.6	A	7.5	A
Food Manufacturing	96.5	A	5.7	A	24.9	A	37.4	A	24.1	A	7.8	A
Beverage and Tobacco Product Manufacturing	98.9	A	9.2	A	10.1	A	40.7	A	30.5	A	9.5	A
Textile Mills	97.4	A	11.2	A	32.1	A	42.1	A	11.2	A	3.3	A
Textile Product Mills	100.0	A	12.7	A	22.5	B	35.8	B	23.4	B	5.7	A
Clothing Manufacturing	95.6	A	12.9	A	23.2	A	38.0	A	18.1	A	7.9	A
Leather and Allied Product Manufacturing	100.0	A	16.9	B	17.3	A	39.0	B	12.1	A	14.7	B
Sawmills and Wood Preservation	94.5	A	5.8	A	14.6	A	40.5	A	25.6	A	13.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	97.8	A	3.7	A	13.6	A	37.6	A	25.0	A	20.1	A
Other Wood Product Manufacturing	99.6	A	7.8	A	16.6	A	41.8	A	26.2	A	7.6	A
Paper Manufacturing	98.9	A	2.5	A	17.1	A	38.1	A	35.6	A	6.7	A
Printing and Related Support Activities	98.9	A	6.0	A	25.9	A	35.2	A	26.2	A	6.8	A
Petroleum and Coal Products Manufacturing	96.3	A	7.7	A	7.7	A	39.4	A	30.8	A	14.4	A
Chemical Manufacturing (excluding 3254)	98.1	A	5.9	A	21.5	A	32.8	A	31.0	A	8.7	A
Pharmaceutical and Medicine Manufacturing (3254)	96.8	A	6.1	A	10.4	A	49.0	A	30.9	A	3.6	A
Plastics and Rubber Products Manufacturing	99.4	A	4.8	A	22.4	A	42.1	A	24.4	A	6.2	A
Non-Metallic Mineral Products Manufacturing	93.5	A	3.2	A	19.4	A	37.9	A	28.9	A	10.6	A
Primary Metal Manufacturing	98.4	A	5.4	A	25.1	A	37.6	A	25.9	A	6.1	A
Fabricated Metal Product Manufacturing	97.4	A	10.0	A	24.2	A	33.0	A	23.8	A	9.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0	A	9.1	A	33.3	A	35.4	A	18.8	A	3.4	A
Machinery Manufacturing (excluding 3331 & 3332)	97.2	A	8.9	A	29.7	A	36.1	A	20.1	A	5.2	A
Computer and Peripheral Equipment Manufacturing	93.3	A	7.1	A	46.8	B	26.0	B	20.0	B	0.0	A
Communications Equipment Manufacturing	98.1	A	1.5	A	34.0	B	38.9	B	22.4	A	3.1	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	8.5	A	46.3	B	24.6	B	18.4	B	2.2	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	16.5	A	25.1	A	28.0	A	27.9	B	2.5	A
Electrical Equipment, Appliance and Component Manufacturing	99.3	A	8.0	A	27.1	A	40.9	A	22.2	A	1.9	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	96.9	A	3.7	A	18.3	A	40.9	A	27.6	A	9.6	A
Aerospace Product and Parts Manufacturing	100.0	A	20.3	B	25.9	B	15.9	A	30.4	B	7.5	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	96.3	A	18.1	B	21.6	B	31.0	B	27.7	B	1.6	A
Furniture and Related Products Manufacturing	97.7	A	9.5	A	22.4	A	36.8	A	22.5	A	8.8	A
Miscellaneous Manufacturing	97.1	A	6.4	A	33.6	B	26.7	A	28.2	A	5.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.1
Competitive Environment
Competitive Factor by Industry
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
My clients can easily substitute my products (goods or services) for the products of my competitors												
Total Manufacturing Industries	98.2	A	5.4	A	13.7	A	20.6	A	28.2	A	32.1	A
Food Manufacturing	97.7	A	4.7	A	8.7	A	21.7	A	34.8	A	30.2	A
Beverage and Tobacco Product Manufacturing	100.0	A	0.0	A	3.3	A	21.2	A	20.4	A	55.1	A
Textile Mills	97.4	A	2.6	A	15.8	A	14.9	A	36.1	A	30.7	A
Textile Product Mills	100.0	A	12.9	A	15.5	A	12.0	B	34.1	B	25.5	B
Clothing Manufacturing	97.2	A	6.6	A	8.7	A	31.1	A	24.7	A	29.0	A
Leather and Allied Product Manufacturing	98.7	A	13.6	A	9.9	A	22.6	B	28.7	B	25.2	B
Sawmills and Wood Preservation	96.3	A	3.0	A	9.3	A	19.6	A	22.4	A	45.7	A
Veneer, Plywood and Engineered Wood Product Manufacturing	97.8	A	2.2	A	15.0	A	17.0	A	22.1	A	43.6	B
Other Wood Product Manufacturing	99.6	A	5.2	A	12.4	A	19.5	A	19.3	A	43.5	A
Paper Manufacturing	99.3	A	2.7	A	9.0	A	14.3	A	35.5	A	38.5	A
Printing and Related Support Activities	99.2	A	4.8	A	9.9	A	20.1	A	28.5	A	36.6	A
Petroleum and Coal Products Manufacturing	90.7	A	4.1	A	4.1	A	14.3	A	28.6	A	49.0	A
Chemical Manufacturing (excluding 3254)	98.7	A	2.6	A	17.7	A	19.2	A	31.9	A	28.7	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	3.2	A	14.8	A	16.8	A	38.1	A	27.0	A
Plastics and Rubber Products Manufacturing	98.9	A	6.4	A	16.6	A	20.5	A	28.4	A	28.1	A
Non-Metallic Mineral Products Manufacturing	97.5	A	6.6	A	10.5	A	16.2	A	30.9	A	35.8	A
Primary Metal Manufacturing	100.0	A	4.3	A	12.1	A	21.9	A	27.6	A	34.1	A
Fabricated Metal Product Manufacturing	97.8	A	5.5	A	13.2	A	23.3	A	22.3	A	35.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.5	A	3.0	A	17.8	A	18.4	A	30.9	A	29.9	A
Machinery Manufacturing (excluding 3331 & 3332)	98.2	A	4.2	A	16.9	A	20.0	A	30.5	A	28.5	A
Computer and Peripheral Equipment Manufacturing	93.3	A	6.0	B	26.4	B	17.3	A	33.3	B	17.1	A
Communications Equipment Manufacturing	98.5	A	3.5	A	28.6	B	17.3	A	27.9	A	22.7	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	4.1	A	37.4	B	19.1	A	11.4	A	28.1	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	13.2	A	25.3	A	13.8	A	25.0	A	22.8	B
Electrical Equipment, Appliance and Component Manufacturing	99.3	A	4.5	A	11.1	A	23.4	A	34.1	A	26.9	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	96.4	A	9.3	A	20.7	A	18.4	A	24.9	A	26.7	A
Aerospace Product and Parts Manufacturing	98.0	A	18.3	B	34.2	B	6.4	A	17.1	B	23.9	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	98.4	A	4.4	A	20.5	B	11.9	B	47.3	B	16.0	B
Furniture and Related Products Manufacturing	98.5	A	6.0	A	14.5	A	23.5	A	27.9	A	28.2	A
Miscellaneous Manufacturing	98.4	A	6.2	A	14.9	A	21.3	A	29.1	A	28.6	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.1
Competitive Environment
Competitive Factor by Industry
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
My competitors' actions are easy to predict												
Total Manufacturing Industries	97.1	A	7.2	A	27.9	A	41.5	A	19.3	A	4.0	A
Food Manufacturing	96.5	A	5.3	A	27.2	A	44.8	A	19.3	A	3.3	A
Beverage and Tobacco Product Manufacturing	97.8	A	10.2	A	23.6	A	49.8	A	14.1	A	2.3	A
Textile Mills	97.4	A	7.7	A	37.1	A	37.8	A	13.3	A	4.1	A
Textile Product Mills	99.2	A	11.4	A	36.7	B	36.2	B	9.9	A	5.8	A
Clothing Manufacturing	95.8	A	8.7	A	29.3	A	42.3	A	17.6	A	2.0	A
Leather and Allied Product Manufacturing	98.7	A	9.6	A	36.2	B	35.3	B	18.9	B	0.0	A
Sawmills and Wood Preservation	95.4	A	8.3	A	21.6	A	45.0	A	18.6	A	6.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	96.7	A	7.5	A	22.2	A	46.0	B	21.9	A	2.5	A
Other Wood Product Manufacturing	96.5	A	6.1	A	28.4	A	42.7	A	18.0	A	4.7	A
Paper Manufacturing	99.3	A	5.3	A	22.8	A	41.5	A	26.0	A	4.3	A
Printing and Related Support Activities	97.4	A	7.6	A	21.2	A	37.2	B	26.3	A	7.7	A
Petroleum and Coal Products Manufacturing	100.0	A	5.6	A	23.1	A	44.4	A	25.0	A	1.9	A
Chemical Manufacturing (excluding 3254)	98.8	A	4.6	A	29.0	A	44.8	A	19.8	A	1.8	A
Pharmaceutical and Medicine Manufacturing (3254)	98.4	A	1.6	A	30.4	A	43.7	A	21.5	A	2.7	A
Plastics and Rubber Products Manufacturing	99.4	A	4.8	A	31.3	A	40.3	A	19.9	A	3.8	A
Non-Metallic Mineral Products Manufacturing	96.5	A	7.3	A	26.9	A	39.0	A	22.9	A	3.9	A
Primary Metal Manufacturing	98.6	A	7.8	A	32.3	A	43.2	A	14.6	A	2.1	A
Fabricated Metal Product Manufacturing	96.4	A	7.4	A	23.8	A	41.7	A	19.5	A	7.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	97.5	A	5.3	A	27.8	A	40.4	A	23.3	A	3.3	A
Machinery Manufacturing (excluding 3331 & 3332)	98.1	A	10.8	A	29.2	A	42.1	A	14.7	A	3.2	A
Computer and Peripheral Equipment Manufacturing	95.6	A	18.0	B	23.3	B	38.8	B	14.7	B	5.2	A
Communications Equipment Manufacturing	100.0	A	1.5	A	46.9	B	37.8	B	9.8	A	3.9	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	9.4	A	45.9	B	29.2	B	15.4	A	0.0	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	98.2	A	6.8	A	30.0	A	44.7	B	17.6	A	0.8	A
Electrical Equipment, Appliance and Component Manufacturing	100.0	A	11.3	A	27.7	A	37.7	A	21.1	A	2.2	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	96.2	A	5.9	A	29.4	A	43.7	A	17.7	A	3.4	A
Aerospace Product and Parts Manufacturing	97.3	A	11.3	A	40.3	B	37.1	B	8.6	A	2.8	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	97.9	A	11.9	A	33.2	B	34.3	B	19.3	B	1.3	A
Furniture and Related Products Manufacturing	93.9	A	8.6	A	25.8	A	39.2	A	23.7	A	2.6	A
Miscellaneous Manufacturing	95.5	A	4.6	A	35.8	B	41.8	B	15.8	A	2.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.1
Competitive Environment
Competitive Factor by Industry
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
The arrival of new competitors is a constant threat												
Total Manufacturing Industries	97.9	A	7.3	A	20.0	A	23.2	A	25.1	A	24.4	A
Food Manufacturing	96.4	A	6.8	A	16.7	A	20.9	A	29.8	A	25.7	A
Beverage and Tobacco Product Manufacturing	100.0	A	9.9	A	31.8	A	11.6	A	26.3	A	20.4	A
Textile Mills	96.7	A	7.9	A	14.9	A	21.5	A	20.3	A	35.5	A
Textile Product Mills	100.0	A	4.7	A	17.3	B	31.7	B	17.2	B	29.1	B
Clothing Manufacturing	94.8	A	6.9	A	14.5	A	22.4	A	30.9	A	25.3	A
Leather and Allied Product Manufacturing	98.7	A	3.9	A	15.1	B	14.3	A	25.7	B	41.0	B
Sawmills and Wood Preservation	95.6	A	5.1	A	20.6	A	25.6	A	20.0	A	28.7	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	4.2	A	22.4	A	27.2	A	20.3	A	25.8	A
Other Wood Product Manufacturing	95.1	A	9.1	A	14.2	A	15.6	A	22.5	A	38.6	A
Paper Manufacturing	98.6	A	11.3	A	24.8	A	19.5	A	23.3	A	21.1	A
Printing and Related Support Activities	99.3	A	4.0	A	24.0	A	23.9	A	23.9	A	24.2	A
Petroleum and Coal Products Manufacturing	96.3	A	15.4	A	25.0	A	18.3	A	24.0	A	17.3	A
Chemical Manufacturing (excluding 3254)	98.3	A	6.5	A	23.6	A	24.0	A	27.2	A	18.7	A
Pharmaceutical and Medicine Manufacturing (3254)	98.4	A	7.9	A	19.4	A	9.7	A	38.4	B	24.6	A
Plastics and Rubber Products Manufacturing	98.7	A	5.4	A	20.6	A	26.3	A	27.8	A	19.8	A
Non-Metallic Mineral Products Manufacturing	97.0	A	9.4	A	22.2	A	21.4	A	19.0	A	28.0	A
Primary Metal Manufacturing	98.3	A	8.0	A	24.3	A	21.8	A	28.4	A	17.5	A
Fabricated Metal Product Manufacturing	98.8	A	7.1	A	18.1	A	24.0	A	25.4	A	25.5	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.0	A	7.9	A	19.7	A	22.9	A	22.3	A	27.2	A
Machinery Manufacturing (excluding 3331 & 3332)	98.4	A	7.9	A	18.0	A	31.1	A	22.1	A	20.9	A
Computer and Peripheral Equipment Manufacturing	95.6	A	9.7	A	17.2	B	18.6	B	29.3	B	25.2	B
Communications Equipment Manufacturing	100.0	A	6.5	A	28.1	B	19.9	A	29.3	B	16.2	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	4.2	A	15.8	A	32.0	B	23.1	A	24.9	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	99.0	A	7.8	A	20.9	A	29.4	B	17.3	A	24.7	B
Electrical Equipment, Appliance and Component Manufacturing	100.0	A	9.6	A	21.6	A	21.6	A	25.6	A	21.7	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	97.9	A	6.9	A	27.7	A	17.1	A	31.2	A	17.1	A
Aerospace Product and Parts Manufacturing	100.0	A	12.2	A	17.6	B	32.0	B	26.3	B	11.9	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	97.9	A	18.8	B	19.5	B	30.3	B	17.8	B	13.6	B
Furniture and Related Products Manufacturing	98.9	A	9.2	A	18.4	A	25.2	A	23.9	A	23.3	A
Miscellaneous Manufacturing	95.8	A	5.7	A	23.5	A	18.0	A	24.0	A	28.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.1
Competitive Environment
Competitive Factor by Industry
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
The arrival of competing products (goods or services) is a constant threat												
Total Manufacturing Industries	95.6	A	5.0	A	16.0	A	23.6	A	29.9	A	25.5	A
Food Manufacturing	94.1	A	2.7	A	14.1	A	19.2	A	35.3	A	28.7	A
Beverage and Tobacco Product Manufacturing	100.0	A	4.3	A	6.8	A	23.1	A	37.4	A	28.4	A
Textile Mills	97.4	A	2.6	A	10.1	A	22.1	A	25.7	A	39.5	A
Textile Product Mills	96.7	A	3.2	A	8.3	A	27.3	B	31.9	B	29.2	B
Clothing Manufacturing	96.2	A	4.8	A	11.5	A	18.4	A	39.1	A	26.2	A
Leather and Allied Product Manufacturing	98.7	A	0.0	A	7.7	A	22.4	B	20.8	B	49.1	B
Sawmills and Wood Preservation	95.6	A	2.2	A	15.6	A	27.8	A	24.2	A	30.2	A
Veneer, Plywood and Engineered Wood Product Manufacturing	97.2	A	2.2	A	17.8	A	19.6	A	36.2	B	24.2	A
Other Wood Product Manufacturing	96.3	A	3.5	A	11.1	A	27.3	A	28.7	A	29.5	A
Paper Manufacturing	98.9	A	7.0	A	19.4	A	23.1	A	26.6	A	23.9	A
Printing and Related Support Activities	95.2	A	3.3	A	12.0	A	29.2	A	29.5	A	26.0	A
Petroleum and Coal Products Manufacturing	94.4	A	3.9	A	21.6	A	21.6	A	39.2	A	13.7	A
Chemical Manufacturing (excluding 3254)	97.9	A	5.2	A	19.1	A	24.3	A	31.2	A	20.2	A
Pharmaceutical and Medicine Manufacturing (3254)	98.4	A	1.6	A	5.1	A	20.2	A	40.7	A	32.4	A
Plastics and Rubber Products Manufacturing	97.6	A	4.0	A	14.9	A	22.8	A	32.7	A	25.6	A
Non-Metallic Mineral Products Manufacturing	96.5	A	7.4	A	19.5	A	21.8	A	24.3	A	27.0	A
Primary Metal Manufacturing	92.6	A	5.7	A	17.0	A	20.4	A	37.1	A	19.8	A
Fabricated Metal Product Manufacturing	94.3	A	7.0	A	19.2	A	27.4	A	23.3	A	23.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	97.1	A	4.4	A	14.2	A	25.2	A	33.2	A	23.0	A
Machinery Manufacturing (excluding 3331 & 3332)	95.8	A	5.7	A	20.5	A	26.5	A	24.9	A	22.4	A
Computer and Peripheral Equipment Manufacturing	95.6	A	4.7	A	7.9	B	10.5	A	41.9	B	35.1	B
Communications Equipment Manufacturing	95.3	A	3.2	A	20.1	B	9.5	A	32.3	A	35.0	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	98.0	A	2.1	A	18.1	A	18.0	B	38.5	B	23.3	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	93.6	A	4.4	A	14.9	A	25.7	A	27.1	A	27.9	B
Electrical Equipment, Appliance and Component Manufacturing	99.3	A	5.7	A	14.9	A	23.6	A	29.9	A	25.9	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	92.0	A	4.7	A	22.0	A	20.1	A	33.4	A	19.8	A
Aerospace Product and Parts Manufacturing	88.1	A	10.3	A	18.5	B	25.4	B	32.0	B	13.8	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	97.9	A	8.2	B	32.3	B	22.6	B	24.2	B	12.7	B
Furniture and Related Products Manufacturing	95.5	A	9.8	A	14.0	A	24.6	A	29.9	A	21.6	A
Miscellaneous Manufacturing	93.9	A	3.2	A	16.0	A	20.1	A	29.8	B	31.0	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.1
Competitive Environment
Competitive Factor by Industry
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	**Reliability**	**Percent**	**Reliability**	**Percent**	**Reliability**	**Percent**	**Reliability**	**Percent**	**Reliability**	**Percent**	**Reliability**
My firm can easily replace its current suppliers												
Total Manufacturing Industries	98.5	A	14.3	A	30.4	A	31.0	A	17.8	A	6.6	A
Food Manufacturing	97.9	A	18.4	A	26.6	A	28.7	A	19.0	A	7.3	A
Beverage and Tobacco Product Manufacturing	98.2	A	18.1	A	38.1	A	19.3	A	19.3	A	5.2	A
Textile Mills	98.1	A	12.4	A	36.2	A	31.2	A	15.7	A	4.5	A
Textile Product Mills	100.0	A	12.7	B	48.4	B	19.5	A	15.2	A	4.1	A
Clothing Manufacturing	97.6	A	10.6	A	26.9	A	40.8	A	15.7	A	6.1	A
Leather and Allied Product Manufacturing	94.8	A	13.7	A	42.0	B	31.5	B	6.4	A	6.4	A
Sawmills and Wood Preservation	95.2	A	28.1	A	24.5	A	23.2	A	15.7	A	7.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.9	A	25.3	A	31.4	A	20.9	A	12.8	A	9.6	A
Other Wood Product Manufacturing	99.1	A	11.2	A	28.7	A	27.6	A	21.6	A	10.8	A
Paper Manufacturing	99.6	A	12.1	A	32.7	A	33.5	A	17.3	A	4.4	A
Printing and Related Support Activities	99.6	A	7.5	A	27.1	A	33.1	A	20.9	A	11.4	A
Petroleum and Coal Products Manufacturing	98.1	A	14.2	A	26.4	A	23.6	A	24.5	A	11.3	A
Chemical Manufacturing (excluding 3254)	99.2	A	11.7	A	32.2	A	35.7	A	15.0	A	5.3	A
Pharmaceutical and Medicine Manufacturing (3254)	98.4	A	25.3	A	32.8	A	25.4	B	5.1	A	11.3	A
Plastics and Rubber Products Manufacturing	99.5	A	15.2	A	30.8	A	32.7	A	16.9	A	4.3	A
Non-Metallic Mineral Products Manufacturing	98.1	A	14.6	A	29.0	A	28.0	A	16.8	A	11.5	A
Primary Metal Manufacturing	100.0	A	17.3	A	37.9	A	22.8	A	16.4	A	5.7	A
Fabricated Metal Product Manufacturing	98.0	A	18.0	A	27.3	A	29.6	A	19.4	A	5.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0	A	11.6	A	29.4	A	34.2	A	18.6	A	6.2	A
Machinery Manufacturing (excluding 3331 & 3332)	98.7	A	8.8	A	26.2	A	32.8	A	24.0	A	8.3	A
Computer and Peripheral Equipment Manufacturing	95.6	A	19.8	A	42.4	B	9.3	A	17.6	B	10.9	B
Communications Equipment Manufacturing	100.0	A	7.8	A	30.6	B	41.8	B	12.5	A	7.3	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	12.8	A	30.2	B	23.9	A	19.8	B	13.4	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	99.2	A	17.2	A	31.7	B	27.4	B	19.1	A	4.6	A
Electrical Equipment, Appliance and Component Manufacturing	98.8	A	12.3	A	40.6	A	31.1	A	15.5	A	0.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	97.3	A	9.9	A	36.4	A	35.2	A	16.9	A	1.7	A
Aerospace Product and Parts Manufacturing	97.3	A	20.4	B	31.1	B	33.9	B	9.7	A	4.8	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	15.1	B	29.0	B	28.6	B	27.3	B	0.0	A
Furniture and Related Products Manufacturing	99.8	A	11.7	A	32.6	A	34.6	A	17.5	A	3.6	A
Miscellaneous Manufacturing	97.4	A	14.7	A	34.3	B	30.8	A	11.8	A	8.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.1
Competitive Environment
Competitive Factor by Industry
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
It is difficult to hire qualified staff and workers												
Total Manufacturing Industries	98.7	A	3.6	A	10.6	A	23.1	A	32.4	A	30.3	A
Food Manufacturing	98.2	A	3.4	A	15.6	A	28.6	A	29.9	A	22.5	A
Beverage and Tobacco Product Manufacturing	98.9	A	8.9	A	21.6	A	27.4	A	29.4	A	12.7	A
Textile Mills	98.0	A	4.0	A	6.4	A	25.1	A	30.3	A	34.3	A
Textile Product Mills	100.0	A	0.0	A	7.5	A	23.6	B	43.8	B	25.2	A
Clothing Manufacturing	96.5	A	3.7	A	9.1	A	23.2	A	29.7	A	34.4	A
Leather and Allied Product Manufacturing	98.7	A	0.0	A	1.3	A	34.0	B	31.1	B	33.6	B
Sawmills and Wood Preservation	98.3	A	5.7	A	10.1	A	29.7	A	30.4	A	24.1	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.2	A	4.2	A	15.1	A	19.5	A	39.0	A	22.2	A
Other Wood Product Manufacturing	98.8	A	3.0	A	12.8	A	23.1	A	34.0	A	27.2	A
Paper Manufacturing	98.2	A	7.7	A	19.4	A	20.7	A	33.4	A	18.8	A
Printing and Related Support Activities	98.7	A	4.8	A	7.5	A	17.5	A	33.0	A	37.1	A
Petroleum and Coal Products Manufacturing	98.1	A	0.0	A	5.7	A	42.5	A	40.6	A	11.3	A
Chemical Manufacturing (excluding 3254)	99.2	A	3.8	A	19.4	A	30.6	A	31.4	A	14.8	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	1.6	A	12.0	A	27.2	A	34.3	A	24.9	A
Plastics and Rubber Products Manufacturing	98.8	A	4.0	A	11.9	A	19.0	A	27.7	A	37.5	A
Non-Metallic Mineral Products Manufacturing	98.5	A	3.7	A	16.2	A	26.7	A	32.9	A	20.5	A
Primary Metal Manufacturing	100.0	A	2.2	A	15.0	A	29.0	A	22.1	A	31.6	A
Fabricated Metal Product Manufacturing	98.4	A	1.9	A	5.2	A	23.2	A	31.7	A	38.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.7	A	3.2	A	11.0	A	20.3	A	33.2	A	32.3	A
Machinery Manufacturing (excluding 3331 & 3332)	99.4	A	3.5	A	8.0	A	14.1	A	35.0	A	39.5	A
Computer and Peripheral Equipment Manufacturing	97.8	A	5.3	B	4.5	A	37.3	B	14.4	B	38.4	B
Communications Equipment Manufacturing	100.0	A	6.9	A	5.4	A	21.6	A	34.2	B	31.9	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	2.2	A	5.1	A	14.7	A	44.4	B	33.7	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	2.5	A	15.4	A	22.9	A	39.7	B	19.5	A
Electrical Equipment, Appliance and Component Manufacturing	99.3	A	5.0	A	15.4	A	21.2	A	32.4	A	26.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.3	A	4.1	A	10.4	A	24.4	A	35.0	A	26.1	A
Aerospace Product and Parts Manufacturing	98.4	A	4.4	A	7.8	A	22.2	B	36.5	B	29.0	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	9.4	A	9.3	A	23.4	B	35.6	B	22.3	B
Furniture and Related Products Manufacturing	99.5	A	3.2	A	6.2	A	19.0	A	36.1	A	35.5	A
Miscellaneous Manufacturing	99.1	A	3.6	A	7.0	A	21.0	A	33.9	A	34.5	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.1
Competitive Environment
Competitive Factor by Industry
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
It is difficult to retain qualified staff and workers												
Total Manufacturing Industries	98.8	A	7.6	A	25.6	A	32.9	A	23.4	A	10.5	A
Food Manufacturing	98.6	A	6.4	A	24.4	A	33.7	A	23.9	A	11.5	A
Beverage and Tobacco Product Manufacturing	98.9	A	11.6	A	28.1	A	31.6	A	19.2	A	9.4	A
Textile Mills	98.0	A	2.6	A	27.5	A	28.4	A	28.8	A	12.7	A
Textile Product Mills	100.0	A	3.1	A	26.5	B	41.8	B	19.5	B	9.0	A
Clothing Manufacturing	96.8	A	9.1	A	19.1	A	36.0	A	23.3	A	12.5	A
Leather and Allied Product Manufacturing	98.7	A	3.7	A	14.9	A	40.6	B	25.0	B	15.8	A
Sawmills and Wood Preservation	95.6	A	9.3	A	22.4	A	30.2	A	24.4	A	13.6	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.2	A	9.4	A	26.3	A	30.0	A	26.8	A	7.4	A
Other Wood Product Manufacturing	96.7	A	5.3	A	28.6	A	34.9	A	21.8	A	9.4	A
Paper Manufacturing	98.5	A	12.8	A	35.0	A	26.8	A	17.4	A	8.1	A
Printing and Related Support Activities	99.6	A	12.7	A	27.6	A	27.2	A	27.3	A	5.2	A
Petroleum and Coal Products Manufacturing	98.1	A	1.9	A	40.6	A	41.5	A	16.0	A	0.0	A
Chemical Manufacturing (excluding 3254)	98.9	A	10.7	A	33.6	A	29.1	A	23.4	A	3.3	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	6.7	A	29.1	B	30.8	A	22.2	A	11.2	A
Plastics and Rubber Products Manufacturing	99.2	A	7.2	A	25.7	A	29.1	A	25.5	A	12.5	A
Non-Metallic Mineral Products Manufacturing	98.9	A	13.7	A	28.5	A	29.3	A	16.4	A	12.1	A
Primary Metal Manufacturing	100.0	A	11.4	A	27.3	A	31.7	A	21.1	A	8.5	A
Fabricated Metal Product Manufacturing	98.8	A	5.9	A	27.5	A	36.9	A	18.8	A	11.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.0	A	3.2	A	23.0	A	39.5	A	21.0	A	13.4	A
Machinery Manufacturing (excluding 3331 & 3332)	99.3	A	7.7	A	22.6	A	34.1	A	27.7	A	7.9	A
Computer and Peripheral Equipment Manufacturing	97.8	A	4.5	A	8.0	B	39.4	B	41.3	B	6.8	A
Communications Equipment Manufacturing	100.0	A	5.3	A	18.6	A	38.9	B	23.0	A	14.3	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	4.3	A	8.3	A	51.8	B	20.8	B	14.8	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	4.9	A	18.1	A	30.4	B	37.8	B	8.8	A
Electrical Equipment, Appliance and Component Manufacturing	99.3	A	5.9	A	32.2	A	29.3	A	24.3	A	8.4	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.3	A	5.6	A	26.8	A	34.5	A	27.6	A	5.5	A
Aerospace Product and Parts Manufacturing	100.0	A	2.8	A	12.4	A	35.3	B	32.0	B	17.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	8.0	B	19.1	B	36.7	B	25.8	B	10.4	A
Furniture and Related Products Manufacturing	99.5	A	4.5	A	23.0	A	27.7	A	26.4	A	18.5	A
Miscellaneous Manufacturing	99.6	A	7.6	A	23.6	A	35.1	B	20.5	A	13.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.1
Competitive Environment
Competitive Factor by Industry
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
My products (goods or services) quickly become obsolete												
Total Manufacturing Industries	93.9	A	36.6	A	34.5	A	16.7	A	7.3	A	4.9	A
Food Manufacturing	94.2	A	34.2	A	30.7	A	17.6	A	9.8	A	7.7	A
Beverage and Tobacco Product Manufacturing	97.8	A	43.8	A	29.5	A	15.2	A	1.2	A	10.4	A
Textile Mills	91.2	A	19.0	A	41.6	A	22.6	A	8.9	A	7.9	A
Textile Product Mills	98.5	A	16.7	B	53.7	B	16.2	A	11.9	A	1.6	A
Clothing Manufacturing	93.3	A	23.9	A	25.1	A	22.2	A	14.8	A	14.1	A
Leather and Allied Product Manufacturing	96.1	A	30.6	B	33.3	B	16.7	A	9.2	A	10.1	A
Sawmills and Wood Preservation	89.4	A	44.9	A	32.2	A	12.5	A	7.9	A	2.6	A
Veneer, Plywood and Engineered Wood Product Manufacturing	94.2	A	51.6	B	28.3	A	12.4	A	5.9	A	1.9	A
Other Wood Product Manufacturing	92.2	A	42.6	A	34.5	A	13.2	A	4.9	A	4.8	A
Paper Manufacturing	96.6	A	42.0	A	39.4	A	10.0	A	4.7	A	4.0	A
Printing and Related Support Activities	86.8	A	24.5	A	28.0	A	24.4	A	13.2	A	9.9	A
Petroleum and Coal Products Manufacturing	90.7	A	53.1	A	22.4	A	6.1	A	14.3	A	4.1	A
Chemical Manufacturing (excluding 3254)	98.1	A	32.7	A	39.8	A	18.3	A	7.4	A	1.8	A
Pharmaceutical and Medicine Manufacturing (3254)	96.8	A	24.4	A	39.7	A	28.7	B	4.4	A	2.8	A
Plastics and Rubber Products Manufacturing	96.2	A	32.0	A	43.5	A	14.0	A	5.0	A	5.4	A
Non-Metallic Mineral Products Manufacturing	92.9	A	55.1	A	29.6	A	7.8	A	5.0	A	2.5	A
Primary Metal Manufacturing	92.0	A	44.4	A	39.2	A	11.4	A	2.6	A	2.5	A
Fabricated Metal Product Manufacturing	93.9	A	50.9	A	30.4	A	12.7	A	3.2	A	2.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.6	A	36.8	A	40.5	A	17.9	A	2.0	A	2.8	A
Machinery Manufacturing (excluding 3331 & 3332)	93.2	A	35.9	A	36.5	A	18.6	A	4.9	A	4.2	A
Computer and Peripheral Equipment Manufacturing	97.8	A	7.8	B	27.1	B	22.0	B	26.5	B	16.7	B
Communications Equipment Manufacturing	95.5	A	16.6	B	37.5	B	33.8	A	12.0	A	0.0	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	98.0	A	10.7	A	34.6	B	25.8	B	24.6	A	4.3	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	96.3	A	20.3	A	41.6	B	24.7	B	10.7	A	2.7	A
Electrical Equipment, Appliance and Component Manufacturing	98.8	A	27.2	A	39.4	A	23.6	A	7.2	A	2.6	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	94.7	A	32.4	A	45.1	A	15.1	A	5.2	A	2.2	A
Aerospace Product and Parts Manufacturing	84.4	A	45.7	B	30.6	B	9.1	A	5.3	A	9.4	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	94.4	A	34.4	B	38.1	B	17.4	B	6.4	A	3.7	A
Furniture and Related Products Manufacturing	95.5	A	37.9	A	31.3	A	19.5	A	8.8	A	2.6	A
Miscellaneous Manufacturing	92.1	A	37.5	B	35.6	B	17.5	A	7.3	A	2.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.1

Competitive Environment

Competitive Factor by Industry

Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Production technologies change rapidly												
Total Manufacturing Industries	97.7	A	6.6	A	22.0	A	31.3	A	25.6	A	14.6	A
Food Manufacturing	98.5	A	6.6	A	24.1	A	28.8	A	27.3	A	13.2	A
Beverage and Tobacco Product Manufacturing	98.2	A	6.4	A	28.7	A	25.2	A	28.2	A	11.4	A
Textile Mills	98.7	A	6.6	A	24.5	A	28.5	A	24.2	A	16.2	A
Textile Product Mills	98.5	A	5.3	A	26.8	A	36.6	B	23.1	B	8.2	A
Clothing Manufacturing	95.0	A	9.3	A	20.2	A	34.8	A	23.0	A	12.7	A
Leather and Allied Product Manufacturing	97.4	A	9.1	A	18.2	B	21.1	B	40.2	B	11.3	A
Sawmills and Wood Preservation	96.8	A	6.1	A	12.9	A	22.6	A	37.0	A	21.3	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	4.1	A	25.0	A	29.6	A	26.8	A	14.5	A
Other Wood Product Manufacturing	96.5	A	6.9	A	24.7	A	35.2	A	24.3	A	9.0	A
Paper Manufacturing	99.1	A	7.8	A	21.6	A	37.1	A	23.5	A	9.9	A
Printing and Related Support Activities	99.4	A	2.1	A	8.3	A	22.9	A	26.7	A	40.0	A
Petroleum and Coal Products Manufacturing	94.4	A	3.9	A	36.3	A	37.3	A	20.6	A	2.0	A
Chemical Manufacturing (excluding 3254)	99.5	A	10.4	A	27.8	A	28.1	A	25.3	A	8.5	A
Pharmaceutical and Medicine Manufacturing (3254)	98.4	A	7.6	A	21.7	A	16.8	A	31.8	A	22.0	A
Plastics and Rubber Products Manufacturing	98.0	A	2.3	A	22.6	A	34.9	A	30.6	A	9.7	A
Non-Metallic Mineral Products Manufacturing	97.9	A	7.4	A	31.3	A	30.4	A	19.3	A	11.5	A
Primary Metal Manufacturing	98.6	A	8.7	A	29.1	A	34.4	A	15.6	A	12.3	A
Fabricated Metal Product Manufacturing	96.3	A	9.2	A	23.4	A	30.9	A	25.1	A	11.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.5	A	6.4	A	18.4	A	40.3	A	23.1	A	11.7	A
Machinery Manufacturing (excluding 3331 & 3332)	98.1	A	7.7	A	20.1	A	28.8	A	24.9	A	18.6	A
Computer and Peripheral Equipment Manufacturing	100.0	A	2.8	A	4.8	A	42.2	B	27.6	B	22.6	A
Communications Equipment Manufacturing	100.0	A	6.6	A	17.2	A	28.6	A	21.3	A	26.4	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	94.9	A	4.4	A	11.0	A	30.2	B	36.7	B	17.6	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	97.3	A	3.6	A	19.6	A	27.3	B	32.4	B	17.1	A
Electrical Equipment, Appliance and Component Manufacturing	98.4	A	7.1	A	22.2	A	42.0	A	19.7	A	9.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	96.1	A	3.3	A	24.2	A	28.1	A	32.9	A	11.4	A
Aerospace Product and Parts Manufacturing	100.0	A	0.0	A	28.4	B	25.1	B	22.5	B	24.0	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	97.1	A	4.2	A	24.6	B	35.5	B	19.5	B	16.2	B
Furniture and Related Products Manufacturing	97.5	A	4.4	A	19.6	A	34.1	A	25.4	A	16.4	A
Miscellaneous Manufacturing	96.9	A	8.5	A	23.3	A	38.2	B	20.0	A	9.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.1
Competitive Environment
Competitive Factor by Industry
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Office technologies change rapidly												
Total Manufacturing Industries	97.4	A	2.3	A	8.4	A	24.4	A	37.8	A	27.0	A
Food Manufacturing	96.7	A	1.8	A	8.6	A	25.0	A	36.0	A	28.6	A
Beverage and Tobacco Product Manufacturing	100.0	A	2.3	A	6.6	A	18.4	A	42.8	A	29.9	A
Textile Mills	96.1	A	2.0	A	4.6	A	27.6	A	26.9	A	38.9	A
Textile Product Mills	98.5	A	3.4	A	4.8	A	24.4	B	27.8	B	39.7	B
Clothing Manufacturing	95.1	A	5.4	A	6.4	A	25.7	A	33.7	A	28.9	A
Leather and Allied Product Manufacturing	97.4	A	6.4	B	5.1	A	12.4	A	46.7	B	29.3	B
Sawmills and Wood Preservation	95.1	A	1.8	A	7.1	A	23.3	A	36.0	A	31.8	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	0.0	A	6.1	A	25.1	A	43.6	A	25.3	A
Other Wood Product Manufacturing	97.8	A	2.0	A	8.2	A	17.1	A	38.9	A	33.8	A
Paper Manufacturing	98.9	A	3.6	A	7.7	A	22.7	A	36.2	A	30.0	A
Printing and Related Support Activities	99.4	A	1.0	A	5.5	A	27.8	A	37.8	A	27.9	A
Petroleum and Coal Products Manufacturing	98.1	A	1.9	A	7.5	A	24.5	A	41.5	A	24.5	A
Chemical Manufacturing (excluding 3254)	99.5	A	1.8	A	9.5	A	19.8	A	45.0	A	23.9	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	1.6	A	7.5	A	21.6	A	42.8	B	26.5	A
Plastics and Rubber Products Manufacturing	98.5	A	1.5	A	9.5	A	23.0	A	43.8	A	22.2	A
Non-Metallic Mineral Products Manufacturing	96.5	A	1.6	A	7.5	A	24.4	A	38.5	A	27.9	A
Primary Metal Manufacturing	98.9	A	1.9	A	11.8	A	15.9	A	39.9	A	30.5	A
Fabricated Metal Product Manufacturing	97.6	A	3.0	A	9.6	A	25.9	A	36.0	A	25.5	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.7	A	1.1	A	2.8	A	28.8	A	41.4	A	26.0	A
Machinery Manufacturing (excluding 3331 & 3332)	95.8	A	2.4	A	6.8	A	25.8	A	35.5	A	29.5	A
Computer and Peripheral Equipment Manufacturing	100.0	A	0.0	A	7.2	A	32.6	B	31.1	B	29.1	B
Communications Equipment Manufacturing	96.8	A	0.0	A	15.6	A	14.5	A	53.2	B	16.8	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	0.0	A	6.4	A	41.6	B	38.6	B	13.4	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	93.7	A	4.7	A	8.1	A	23.0	A	42.7	B	21.5	A
Electrical Equipment, Appliance and Component Manufacturing	98.1	A	0.7	A	10.8	A	24.8	A	36.3	A	27.4	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	96.8	A	1.1	A	10.2	A	26.3	A	44.6	A	17.8	A
Aerospace Product and Parts Manufacturing	100.0	A	0.0	A	10.1	A	18.1	B	38.3	B	33.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	98.7	A	3.8	A	14.0	B	17.3	B	36.9	B	28.0	B
Furniture and Related Products Manufacturing	97.0	A	4.7	A	12.2	A	23.7	A	36.4	A	23.0	A
Miscellaneous Manufacturing	96.1	A	1.5	A	10.9	A	29.9	B	33.0	B	24.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.2
Competitive Environment
Competitive Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
My client's demands are easy to predict												
Total Manufacturing Industries	98.4	A	7.0	A	25.0	A	36.8	A	24.6	A	6.6	A
Food Manufacturing	98.0	A	4.5	A	27.9	A	37.3	A	24.0	A	6.4	A
Beverage and Tobacco Product Manufacturing	98.6	A	10.6	A	13.2	A	36.8	A	34.2	A	5.2	A
Textile Mills	97.0	A	10.8	A	31.4	A	42.4	A	11.6	A	3.9	A
Textile Product Mills	100.0	A	6.6	A	23.4	B	38.9	B	24.3	B	6.8	A
Clothing Manufacturing	97.2	A	12.6	A	23.5	A	39.0	A	18.6	A	6.4	A
Leather and Allied Product Manufacturing	100.0	A	16.5	B	22.2	B	40.2	B	5.4	A	15.6	B
Sawmills and Wood Preservation	96.2	A	5.1	A	16.3	A	38.9	A	26.4	A	13.3	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.3	A	1.5	A	13.9	A	39.6	B	30.3	B	14.7	A
Other Wood Product Manufacturing	99.5	A	7.8	A	16.0	A	41.1	A	28.5	A	6.6	A
Paper Manufacturing	99.5	A	2.7	A	19.6	A	35.1	A	36.1	A	6.4	A
Printing and Related Support Activities	99.1	A	5.4	A	27.1	B	36.8	B	24.3	A	6.4	A
Petroleum and Coal Products Manufacturing	97.6	A	7.5	A	10.0	A	40.0	A	32.5	A	10.0	A
Chemical Manufacturing (excluding 3254)	98.2	A	5.9	A	23.4	A	32.8	A	30.8	A	7.1	A
Pharmaceutical and Medicine Manufacturing (3254)	98.1	A	3.8	A	11.9	A	44.9	B	35.3	B	4.1	A
Plastics and Rubber Products Manufacturing	100.0	A	4.4	A	23.1	A	42.7	A	22.9	A	6.8	A
Non-Metallic Mineral Products Manufacturing	96.2	A	3.0	A	20.2	A	42.0	A	27.0	A	7.8	A
Primary Metal Manufacturing	100.0	A	3.8	A	24.8	A	39.4	A	27.1	A	4.9	A
Fabricated Metal Product Manufacturing	99.0	A	9.0	A	25.1	A	33.9	A	24.8	A	7.2	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0	A	9.8	A	33.8	A	33.5	A	19.1	A	3.8	A
Machinery Manufacturing (excluding 3331 & 3332)	97.2	A	8.4	A	28.4	A	37.9	B	20.1	A	5.2	A
Computer and Peripheral Equipment Manufacturing	95.3	A	7.3	A	48.0	B	24.2	B	20.5	B	0.0	A
Communications Equipment Manufacturing	97.9	A	1.7	A	34.6	B	35.8	B	24.6	A	3.4	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	9.0	A	48.8	B	20.6	B	19.4	B	2.3	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	15.2	B	25.5	A	29.7	A	26.8	B	2.8	A
Electrical Equipment, Appliance and Component Manufacturing	99.2	A	7.6	A	26.9	A	40.8	A	22.6	A	2.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	99.3	A	3.8	A	18.9	A	42.1	B	26.3	A	8.9	A
Aerospace Product and Parts Manufacturing	100.0	A	16.7	B	30.9	B	17.3	B	26.1	B	8.9	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	97.9	A	20.9	B	25.5	B	23.6	B	30.0	B	0.0	A
Furniture and Related Products Manufacturing	97.2	A	7.8	A	23.0	A	37.7	A	21.7	A	9.9	A
Miscellaneous Manufacturing	96.5	A	4.5	A	33.3	B	28.4	B	29.2	B	4.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.2
Competitive Environment
Competitive Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
My clients can easily substitute my products (goods or services) for the products of my competitors												
Total Manufacturing Industries	98.9	A	5.7	A	14.7	A	20.7	A	28.3	A	30.6	A
Food Manufacturing	98.8	A	4.8	A	10.1	A	22.6	A	33.7	A	28.9	A
Beverage and Tobacco Product Manufacturing	100.0	A	0.0	A	2.8	A	17.0	A	19.1	A	61.1	A
Textile Mills	97.0	A	3.0	A	16.2	A	17.4	A	33.6	A	29.8	A
Textile Product Mills	100.0	A	7.8	A	18.6	A	12.7	B	34.0	B	26.9	B
Clothing Manufacturing	98.9	A	7.7	A	7.8	A	34.0	A	26.1	A	24.4	A
Leather and Allied Product Manufacturing	98.2	A	14.1	B	8.6	A	19.3	B	36.4	B	21.7	B
Sawmills and Wood Preservation	99.2	A	3.2	A	7.6	A	17.8	A	22.6	A	48.7	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.3	A	1.7	A	9.3	A	21.2	B	24.9	B	42.9	B
Other Wood Product Manufacturing	99.5	A	3.5	A	13.3	A	17.7	A	17.7	A	47.9	B
Paper Manufacturing	99.5	A	2.2	A	9.3	A	15.1	A	34.0	A	39.4	A
Printing and Related Support Activities	99.3	A	5.7	A	11.7	A	19.0	A	27.1	B	36.6	B
Petroleum and Coal Products Manufacturing	92.7	A	2.6	A	2.6	A	15.8	A	26.3	A	52.6	A
Chemical Manufacturing (excluding 3254)	99.1	A	3.0	A	18.5	A	19.4	A	31.9	A	27.2	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	1.9	A	10.1	A	19.5	A	41.0	B	27.5	A
Plastics and Rubber Products Manufacturing	99.0	A	6.8	A	16.7	A	20.4	A	28.2	A	27.9	A
Non-Metallic Mineral Products Manufacturing	96.9	A	6.1	A	11.6	A	18.1	A	27.8	A	36.5	A
Primary Metal Manufacturing	100.0	A	3.6	A	13.5	A	24.3	A	27.6	A	31.1	A
Fabricated Metal Product Manufacturing	99.4	A	6.6	A	14.8	A	24.5	A	23.2	A	30.9	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.4	A	2.2	A	17.3	A	19.8	A	30.0	A	30.6	A
Machinery Manufacturing (excluding 3331 & 3332)	99.0	A	4.1	A	18.2	A	20.9	A	30.9	A	25.9	A
Computer and Peripheral Equipment Manufacturing	95.3	A	6.1	B	27.0	B	15.2	A	34.1	B	17.5	A
Communications Equipment Manufacturing	100.0	A	2.1	A	29.1	B	18.6	A	28.3	B	21.9	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	4.3	A	39.4	B	20.2	A	6.6	A	29.6	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	14.5	A	25.9	A	14.0	A	25.7	B	19.9	B
Electrical Equipment, Appliance and Component Manufacturing	99.2	A	5.0	A	10.6	A	22.5	A	34.8	A	27.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.5	A	11.6	A	21.3	A	14.1	A	28.4	A	24.6	A
Aerospace Product and Parts Manufacturing	100.0	A	21.4	B	36.6	B	5.6	A	20.0	B	16.5	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	97.9	A	5.9	A	24.6	B	7.7	B	50.0	B	11.8	B
Furniture and Related Products Manufacturing	98.1	A	5.5	A	15.3	A	23.5	A	29.0	A	26.7	A
Miscellaneous Manufacturing	98.4	A	7.5	A	17.8	A	20.2	B	26.1	A	28.4	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.2
Competitive Environment
Competitive Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
My competitors' actions are easy to predict												
Total Manufacturing Industries	98.0	A	6.8	A	28.8	A	41.3	A	19.2	A	3.8	A
Food Manufacturing	97.6	A	4.3	A	27.4	A	45.4	A	19.5	A	3.3	A
Beverage and Tobacco Product Manufacturing	97.2	A	9.1	A	25.9	A	49.0	A	14.6	A	1.5	A
Textile Mills	97.0	A	9.0	A	36.4	A	39.6	A	11.7	A	3.3	A
Textile Product Mills	99.1	A	4.9	A	37.5	B	39.7	B	11.0	A	6.9	A
Clothing Manufacturing	97.1	A	9.1	A	32.3	A	39.7	A	17.1	A	1.9	A
Leather and Allied Product Manufacturing	98.2	A	13.5	B	38.5	B	35.2	B	12.8	B	0.0	A
Sawmills and Wood Preservation	98.3	A	6.4	A	23.6	A	43.8	A	17.7	A	8.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.3	A	7.3	A	24.6	B	40.1	B	26.3	B	1.7	A
Other Wood Product Manufacturing	99.4	A	5.5	A	26.7	A	44.3	B	19.5	A	4.0	A
Paper Manufacturing	99.5	A	5.8	A	20.0	A	42.8	A	27.5	A	3.9	A
Printing and Related Support Activities	98.0	A	6.2	A	21.5	A	36.4	B	26.9	A	9.0	A
Petroleum and Coal Products Manufacturing	100.0	A	4.9	A	24.4	A	46.3	A	22.0	A	2.4	A
Chemical Manufacturing (excluding 3254)	98.9	A	5.0	A	30.2	A	43.0	A	20.4	A	1.4	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	1.9	A	30.5	A	47.9	B	16.7	A	3.1	A
Plastics and Rubber Products Manufacturing	100.0	A	4.7	A	33.1	A	38.7	A	19.8	A	3.7	A
Non-Metallic Mineral Products Manufacturing	97.0	A	7.1	A	23.4	A	41.6	A	24.7	A	3.2	A
Primary Metal Manufacturing	100.0	A	6.6	A	31.4	A	46.0	A	13.9	A	2.2	A
Fabricated Metal Product Manufacturing	97.8	A	7.1	A	27.5	A	39.8	A	19.6	A	6.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.3	A	5.9	A	27.8	A	41.0	A	21.6	A	3.7	A
Machinery Manufacturing (excluding 3331 & 3332)	98.6	A	9.3	A	29.7	A	42.0	B	15.6	A	3.5	A
Computer and Peripheral Equipment Manufacturing	97.7	A	18.5	B	23.8	B	37.3	B	15.1	B	5.4	A
Communications Equipment Manufacturing	100.0	A	1.7	A	51.3	B	33.7	B	9.1	A	4.3	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	9.9	A	43.0	B	30.8	B	16.3	B	0.0	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	98.0	A	5.7	A	29.9	B	44.1	B	19.3	A	0.9	A
Electrical Equipment, Appliance and Component Manufacturing	100.0	A	12.6	A	26.7	A	39.9	A	18.3	A	2.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.4	A	6.1	A	27.0	A	45.5	B	19.4	A	1.9	A
Aerospace Product and Parts Manufacturing	96.8	A	9.2	A	39.3	B	44.4	B	3.7	A	3.3	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	15.6	B	36.0	B	26.4	B	20.3	B	1.7	A
Furniture and Related Products Manufacturing	92.6	A	7.9	A	28.7	A	40.2	B	21.2	A	2.0	A
Miscellaneous Manufacturing	96.5	A	5.1	A	35.2	B	42.6	B	15.0	A	2.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.2
Competitive Environment
Competitive Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
The arrival of new competitors is a constant threat												
Total Manufacturing Industries	98.3	A	6.8	A	20.5	A	22.5	A	25.4	A	24.8	A
Food Manufacturing	97.6	A	6.2	A	15.9	A	20.8	A	30.9	A	26.2	A
Beverage and Tobacco Product Manufacturing	100.0	A	12.9	A	31.2	A	11.6	A	22.0	A	22.3	A
Textile Mills	96.2	A	7.7	A	16.5	A	21.2	A	19.3	A	35.3	A
Textile Product Mills	100.0	A	3.7	A	19.8	B	25.5	B	17.1	B	33.9	B
Clothing Manufacturing	95.1	A	6.6	A	15.8	A	21.8	A	32.5	A	23.3	A
Leather and Allied Product Manufacturing	98.2	A	5.5	A	16.2	B	12.8	B	28.7	B	36.7	B
Sawmills and Wood Preservation	97.2	A	4.5	A	20.6	A	24.9	A	17.3	A	32.7	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	1.7	A	24.8	B	29.6	B	17.7	B	26.2	B
Other Wood Product Manufacturing	97.8	A	7.3	A	11.6	A	16.2	A	22.7	A	42.2	A
Paper Manufacturing	98.6	A	9.6	A	21.8	A	20.8	A	25.0	A	22.7	A
Printing and Related Support Activities	99.5	A	4.5	A	24.8	A	24.9	A	24.6	A	21.2	A
Petroleum and Coal Products Manufacturing	95.1	A	15.4	A	28.2	A	15.4	A	23.1	A	17.9	A
Chemical Manufacturing (excluding 3254)	98.6	A	6.6	A	23.7	A	22.0	A	28.3	A	19.4	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	9.0	A	22.0	A	9.0	A	33.8	B	26.2	A
Plastics and Rubber Products Manufacturing	99.2	A	5.6	A	20.7	A	25.7	A	27.1	A	20.9	A
Non-Metallic Mineral Products Manufacturing	96.1	A	5.6	A	20.6	A	24.1	A	17.7	A	32.0	A
Primary Metal Manufacturing	99.4	A	5.9	A	25.7	A	22.9	A	30.6	A	15.0	A
Fabricated Metal Product Manufacturing	99.3	A	6.6	A	19.7	A	20.9	A	26.1	A	26.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.8	A	7.2	A	20.2	A	21.4	A	22.4	A	28.8	A
Machinery Manufacturing (excluding 3331 & 3332)	98.5	A	8.0	A	19.4	A	30.5	A	20.7	A	21.4	A
Computer and Peripheral Equipment Manufacturing	97.7	A	9.9	A	17.7	B	19.0	B	27.6	B	25.8	B
Communications Equipment Manufacturing	100.0	A	2.1	A	28.1	B	21.7	A	30.4	B	17.7	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	4.4	A	16.7	A	28.4	B	24.3	A	26.2	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	98.9	A	8.5	A	20.8	A	31.3	B	16.0	A	23.3	B
Electrical Equipment, Appliance and Component Manufacturing	100.0	A	9.1	A	22.7	A	22.4	A	24.5	A	21.3	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	100.0	A	7.0	A	29.2	A	17.7	A	27.7	A	18.4	A
Aerospace Product and Parts Manufacturing	100.0	A	10.4	A	21.0	B	29.6	B	28.1	B	10.8	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	21.7	B	21.7	B	23.0	B	23.3	B	10.3	B
Furniture and Related Products Manufacturing	98.6	A	8.9	A	17.5	A	26.0	A	25.6	A	22.1	A
Miscellaneous Manufacturing	95.1	A	5.9	A	23.0	B	14.0	A	27.1	B	30.0	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.2
Competitive Environment
Competitive Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
The arrival of competing products (goods or services) is a constant threat												
Total Manufacturing Industries	96.8	A	4.8	A	15.2	A	22.9	A	30.8	A	26.3	A
Food Manufacturing	95.9	A	2.9	A	11.9	A	19.8	A	35.9	A	29.5	A
Beverage and Tobacco Product Manufacturing	100.0	A	5.6	A	7.4	A	21.6	A	39.6	A	25.8	A
Textile Mills	97.0	A	2.3	A	11.0	A	22.0	A	23.0	A	41.7	A
Textile Product Mills	96.0	A	1.9	A	8.3	A	19.9	B	36.5	B	33.3	B
Clothing Manufacturing	97.2	A	4.3	A	11.5	A	16.6	A	43.5	A	24.1	A
Leather and Allied Product Manufacturing	98.2	A	0.0	A	10.7	B	12.5	A	22.3	B	54.4	B
Sawmills and Wood Preservation	98.4	A	1.8	A	15.8	A	24.5	A	24.9	A	33.0	A
Veneer, Plywood and Engineered Wood Product Manufacturing	95.6	A	3.5	A	20.0	A	19.1	B	31.5	B	26.0	B
Other Wood Product Manufacturing	98.9	A	3.2	A	10.4	A	25.3	A	29.6	A	31.5	A
Paper Manufacturing	99.5	A	5.7	A	16.8	A	22.7	A	28.8	A	26.0	A
Printing and Related Support Activities	95.4	A	3.6	A	12.5	A	28.5	B	29.6	B	25.8	A
Petroleum and Coal Products Manufacturing	97.6	A	2.5	A	20.0	A	25.0	A	40.0	A	12.5	A
Chemical Manufacturing (excluding 3254)	98.2	A	5.6	A	17.9	A	23.8	A	32.8	A	19.9	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	1.9	A	5.8	A	23.0	A	38.6	B	30.8	A
Plastics and Rubber Products Manufacturing	98.2	A	3.4	A	13.0	A	22.0	A	34.4	A	27.2	A
Non-Metallic Mineral Products Manufacturing	97.6	A	3.1	A	16.4	A	22.5	A	25.2	A	32.9	A
Primary Metal Manufacturing	93.4	A	6.8	A	14.6	A	20.5	A	41.9	A	16.3	A
Fabricated Metal Product Manufacturing	96.4	A	6.6	A	18.5	A	[illegible]	A	24.7	A	24.8	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.3	A	5.0	A	11.9	A	25.4	A	32.5	A	25.2	A
Machinery Manufacturing (excluding 3331 & 3332)	97.6	A	6.5	A	20.4	A	25.9	A	24.4	A	22.8	A
Computer and Peripheral Equipment Manufacturing	97.7	A	4.8	A	8.1	B	10.7	A	40.5	B	35.9	B
Communications Equipment Manufacturing	96.6	A	0.0	A	18.9	A	10.2	A	33.1	B	37.8	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	97.8	A	2.2	A	19.1	A	13.5	B	40.7	B	24.6	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	94.1	A	4.8	A	15.1	A	24.9	A	25.8	A	29.5	B
Electrical Equipment, Appliance and Component Manufacturing	99.2	A	5.6	A	14.2	A	24.4	A	30.2	A	25.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	93.3	A	4.6	A	20.0	A	20.9	A	34.2	B	20.3	A
Aerospace Product and Parts Manufacturing	95.1	A	11.4	A	18.7	B	26.3	B	31.9	B	11.7	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	6.1	B	42.3	B	17.6	B	24.8	B	9.2	B
Furniture and Related Products Manufacturing	94.7	A	10.0	A	14.6	A	23.9	A	31.2	A	20.3	A
Miscellaneous Manufacturing	95.1	A	3.8	A	14.4	A	23.0	A	27.7	B	31.1	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.2

Competitive Environment

Competitive Factor by Industry

Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
My firm can easily replace its current suppliers												
Total Manufacturing Industries	99.0	A	13.7	A	31.4	A	30.8	A	17.8	A	6.2	A
Food Manufacturing	98.4	A	17.8	A	26.9	A	26.5	A	20.1	A	8.7	A
Beverage and Tobacco Product Manufacturing	100.0	A	14.7	A	42.3	A	21.4	A	17.9	A	3.8	A
Textile Mills	97.7	A	12.0	A	36.8	A	30.5	A	17.6	A	3.0	A
Textile Product Mills	100.0	A	15.2	B	43.6	B	20.5	B	15.7	A	4.9	A
Clothing Manufacturing	98.6	A	10.9	A	28.6	A	38.2	A	17.7	A	4.6	A
Leather and Allied Product Manufacturing	92.8	B	5.8	A	40.8	B	35.3	B	9.1	B	9.1	A
Sawmills and Wood Preservation	96.6	A	26.3	A	23.8	A	25.7	A	17.2	A	7.0	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	20.6	B	35.7	B	26.9	B	7.9	A	8.9	A
Other Wood Product Manufacturing	100.0	A	12.7	A	32.1	A	24.5	A	22.9	A	7.8	A
Paper Manufacturing	100.0	A	14.0	A	31.7	A	32.0	A	17.1	A	5.2	A
Printing and Related Support Activities	99.5	A	8.5	A	28.5	B	31.8	B	19.1	A	12.1	A
Petroleum and Coal Products Manufacturing	97.6	A	10.0	A	30.0	A	22.5	A	30.0	A	7.5	A
Chemical Manufacturing (excluding 3254)	99.7	A	11.6	A	32.1	A	36.2	A	14.4	A	5.7	A
Pharmaceutical and Medicine Manufacturing (3254)	98.1	A	24.4	A	34.0	B	22.5	B	6.0	A	13.1	A
Plastics and Rubber Products Manufacturing	99.8	A	16.1	A	29.7	A	32.7	A	17.7	A	3.7	A
Non-Metallic Mineral Products Manufacturing	98.3	A	13.6	A	31.1	A	26.5	A	16.1	A	12.8	A
Primary Metal Manufacturing	100.0	A	15.6	A	37.5	A	25.4	A	16.1	A	5.4	A
Fabricated Metal Product Manufacturing	98.7	A	16.6	A	30.7	A	29.0	A	18.6	A	5.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0	A	12.6	A	30.7	A	34.8	A	17.7	A	4.1	A
Machinery Manufacturing (excluding 3331 & 3332)	98.8	A	7.0	A	25.8	A	33.9	A	25.1	A	8.2	A
Computer and Peripheral Equipment Manufacturing	97.7	A	20.2	A	43.5	B	7.1	A	18.1	B	11.1	B
Communications Equipment Manufacturing	100.0	A	4.3	A	31.8	B	42.4	B	13.6	A	7.9	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	13.4	A	26.5	B	25.1	A	20.8	B	14.1	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	99.1	A	15.2	A	30.8	B	28.8	B	20.2	B	5.0	A
Electrical Equipment, Appliance and Component Manufacturing	98.7	A	11.8	A	42.7	A	28.5	A	16.5	A	0.6	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.8	A	9.8	A	36.3	B	34.5	A	17.3	A	2.1	A
Aerospace Product and Parts Manufacturing	96.8	A	17.7	B	24.2	B	40.7	B	11.6	B	5.8	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	17.4	B	33.1	B	29.2	B	20.3	B	0.0	A
Furniture and Related Products Manufacturing	100.0	A	11.0	A	34.4	A	36.2	A	16.0	A	2.4	A
Miscellaneous Manufacturing	98.4	A	15.5	A	36.7	B	29.4	B	10.5	A	7.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.2
Competitive Environment
Competitive Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
It is difficult to hire qualified staff and workers												
Total Manufacturing Industries	99.1	A	3.6	A	10.8	A	21.6	A	33.6	A	30.4	A
Food Manufacturing	98.5	A	2.5	A	16.6	A	25.2	A	32.2	A	23.5	A
Beverage and Tobacco Product Manufacturing	98.6	A	5.7	A	24.5	A	26.6	A	28.0	A	15.2	A
Textile Mills	97.7	A	3.0	A	6.7	A	19.7	A	33.9	A	36.8	A
Textile Product Mills	100.0	A	0.0	A	8.0	A	24.5	B	39.9	B	27.6	B
Clothing Manufacturing	97.8	A	3.4	A	9.6	A	19.7	A	31.7	A	35.6	A
Leather and Allied Product Manufacturing	98.2	A	0.0	A	0.0	A	32.1	B	33.0	B	34.9	B
Sawmills and Wood Preservation	100.0	A	7.1	A	9.2	A	26.4	A	32.4	A	24.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing	97.3	A	3.1	A	16.0	A	20.5	B	41.3	B	19.2	B
Other Wood Product Manufacturing	98.9	A	3.9	A	12.9	A	21.4	A	34.7	A	27.1	A
Paper Manufacturing	98.8	A	6.1	A	19.4	A	20.3	A	35.5	A	18.6	A
Printing and Related Support Activities	98.5	A	4.2	A	8.2	A	16.4	A	34.0	B	37.3	B
Petroleum and Coal Products Manufacturing	100.0	A	0.0	A	4.9	A	46.3	A	39.0	A	9.8	A
Chemical Manufacturing (excluding 3254)	99.4	A	3.8	A	20.4	A	27.5	A	32.3	A	16.0	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	0.0	A	9.0	A	25.6	A	39.7	B	25.7	A
Plastics and Rubber Products Manufacturing	99.3	A	4.7	A	10.9	A	17.8	A	28.4	A	38.3	A
Non-Metallic Mineral Products Manufacturing	99.4	A	3.5	A	13.7	A	26.4	A	33.2	A	23.2	A
Primary Metal Manufacturing	100.0	A	1.5	A	16.8	A	27.6	A	23.7	A	30.3	A
Fabricated Metal Product Manufacturing	99.1	A	1.9	A	5.6	A	24.2	A	31.2	A	37.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.5	A	3.6	A	10.1	A	20.1	A	36.3	A	30.0	A
Machinery Manufacturing (excluding 3331 & 3332)	100.0	A	3.5	A	8.4	A	14.2	A	34.4	A	39.5	B
Computer and Peripheral Equipment Manufacturing	97.7	A	5.6	B	4.8	A	34.3	B	15.1	B	40.3	B
Communications Equipment Manufacturing	100.0	A	5.9	A	5.9	A	19.3	A	35.7	B	33.2	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	2.3	A	0.0	A	15.5	A	46.8	B	35.5	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	2.7	A	15.7	A	22.2	A	38.9	B	20.4	B
Electrical Equipment, Appliance and Component Manufacturing	99.2	A	5.6	A	13.2	A	23.1	A	32.0	A	26.2	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	100.0	A	5.2	A	10.3	A	20.3	A	38.1	B	26.0	A
Aerospace Product and Parts Manufacturing	98.1	A	5.3	A	9.4	A	21.6	B	41.7	B	22.1	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	12.5	B	10.7	B	14.6	B	36.1	B	26.1	B
Furniture and Related Products Manufacturing	99.3	A	3.9	A	5.9	A	18.3	A	37.7	A	34.2	A
Miscellaneous Manufacturing	99.0	A	2.8	A	7.8	A	18.5	A	39.2	B	31.7	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.2
Competitive Environment
Competitive Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
It is difficult to retain qualified staff and workers												
Total Manufacturing Industries	99.3	A	7.4	A	25.3	A	32.3	A	24.8	A	10.2	A
Food Manufacturing	98.6	A	5.2	A	23.5	A	33.5	A	26.6	A	11.2	A
Beverage and Tobacco Product Manufacturing	98.6	A	9.6	A	32.4	A	33.0	A	23.7	A	1.4	A
Textile Mills	97.7	A	3.0	A	28.2	A	25.8	A	33.0	A	10.1	A
Textile Product Mills	100.0	A	3.8	A	31.8	B	31.2	B	22.5	B	10.8	A
Clothing Manufacturing	97.8	A	8.2	A	17.0	A	38.9	A	22.8	A	13.2	A
Leather and Allied Product Manufacturing	98.2	A	5.2	A	15.9	B	35.8	B	29.4	B	13.8	A
Sawmills and Wood Preservation	100.0	A	8.7	A	20.1	A	27.7	A	27.6	A	15.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing	97.3	A	8.1	A	29.8	B	29.5	B	25.1	B	7.4	A
Other Wood Product Manufacturing	98.9	A	6.8	A	26.4	A	33.2	A	25.5	A	8.2	A
Paper Manufacturing	100.0	A	12.4	A	36.0	A	25.8	A	17.9	A	7.8	A
Printing and Related Support Activities	99.5	A	12.1	A	27.5	A	28.1	A	26.5	A	5.8	A
Petroleum and Coal Products Manufacturing	100.0	A	2.4	A	41.5	A	41.5	A	14.6	A	0.0	A
Chemical Manufacturing (excluding 3254)	99.1	A	10.5	A	33.5	A	27.3	A	25.1	A	3.7	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	5.8	A	28.8	B	32.0	B	23.6	A	9.8	A
Plastics and Rubber Products Manufacturing	99.7	A	8.1	A	24.4	A	29.3	A	26.2	A	12.0	A
Non-Metallic Mineral Products Manufacturing	99.4	A	13.3	A	27.1	A	27.1	A	17.9	A	14.5	A
Primary Metal Manufacturing	100.0	A	7.9	A	29.3	A	28.8	A	25.6	A	8.5	A
Fabricated Metal Product Manufacturing	99.6	A	5.5	A	27.6	A	38.2	A	19.1	A	9.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.9	A	3.6	A	23.7	A	38.1	A	22.8	A	11.8	A
Machinery Manufacturing (excluding 3331 & 3332)	99.5	A	7.9	A	20.3	A	34.8	A	29.1	A	7.9	A
Computer and Peripheral Equipment Manufacturing	97.7	A	4.8	A	8.3	B	38.9	B	40.9	B	7.1	A
Communications Equipment Manufacturing	100.0	A	5.8	A	18.6	A	38.2	B	21.8	B	15.6	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	4.6	A	8.7	A	49.2	B	21.9	B	15.6	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	4.4	A	18.9	A	28.3	B	38.7	B	9.7	A
Electrical Equipment, Appliance and Component Manufacturing	99.2	A	5.8	A	32.7	A	31.3	A	21.9	A	8.4	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	100.0	A	7.0	A	26.8	A	32.1	B	27.9	A	6.2	A
Aerospace Product and Parts Manufacturing	100.0	A	1.7	A	14.8	B	33.5	B	32.5	B	17.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	7.8	B	19.9	B	27.7	B	32.5	B	12.2	A
Furniture and Related Products Manufacturing	99.3	A	5.2	A	23.1	A	25.4	A	29.5	A	16.7	A
Miscellaneous Manufacturing	99.5	A	8.9	A	22.9	A	35.1	B	20.1	A	13.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.2
Competitive Environment
Competitive Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
My products (goods or services) quickly become obsolete												
Total Manufacturing Industries	94.9	A	35.3	A	34.7	A	17.5	A	7.7	A	4.8	A
Food Manufacturing	95.8	A	32.7	A	31.8	A	18.3	A	9.0	A	8.2	A
Beverage and Tobacco Product Manufacturing	97.1	A	38.1	A	34.3	A	16.3	A	1.5	A	9.8	A
Textile Mills	91.2	A	20.6	A	38.9	A	22.0	A	10.3	A	8.2	A
Textile Product Mills	98.2	A	19.1	B	55.0	B	10.6	A	13.4	A	1.9	A
Clothing Manufacturing	93.9	A	23.0	A	24.7	A	24.7	A	15.5	A	12.1	A
Leather and Allied Product Manufacturing	96.4	A	32.1	B	26.8	B	18.1	B	10.9	B	12.1	B
Sawmills and Wood Preservation	91.4	A	46.1	A	31.3	A	11.4	A	7.7	A	3.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	91.1	A	47.2	B	33.6	B	6.8	A	9.4	A	3.0	A
Other Wood Product Manufacturing	94.2	A	38.3	A	37.4	A	13.8	A	6.2	A	4.3	A
Paper Manufacturing	97.3	A	38.6	A	41.8	A	10.0	A	5.0	A	4.6	A
Printing and Related Support Activities	89.1	A	23.4	A	27.4	B	25.1	B	14.9	A	9.2	A
Petroleum and Coal Products Manufacturing	92.7	A	47.4	A	28.9	A	7.9	A	10.5	A	5.3	A
Chemical Manufacturing (excluding 3254)	98.8	A	33.3	A	39.2	A	17.9	A	8.1	A	1.5	A
Pharmaceutical and Medicine Manufacturing (3254)	98.1	A	25.7	A	43.2	B	26.2	B	5.0	A	0.0	A
Plastics and Rubber Products Manufacturing	95.9	A	30.4	A	44.0	A	14.4	A	5.0	A	6.2	A
Non-Metallic Mineral Products Manufacturing	95.7	A	52.8	A	32.9	A	7.1	A	4.9	A	2.3	A
Primary Metal Manufacturing	91.4	A	41.1	A	42.6	A	10.8	A	2.1	A	3.4	A
Fabricated Metal Product Manufacturing	94.4	A	51.4	A	28.5	A	15.4	A	2.6	A	2.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.4	A	36.0	A	38.1	A	20.4	A	2.3	A	3.1	A
Machinery Manufacturing (excluding 3331 & 3332)	94.1	A	34.7	A	36.3	B	18.9	A	5.5	A	4.5	A
Computer and Peripheral Equipment Manufacturing	100.0	A	7.9	B	25.4	B	22.5	B	27.1	B	17.1	B
Communications Equipment Manufacturing	96.7	A	14.5	B	37.8	B	34.7	B	13.0	A	0.0	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	97.8	A	11.3	A	31.0	B	27.2	B	26.0	B	4.5	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	97.1	A	19.3	A	40.0	B	26.9	B	10.7	A	3.0	A
Electrical Equipment, Appliance and Component Manufacturing	98.6	A	26.4	A	36.3	A	26.3	A	8.1	A	2.9	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.1	A	35.3	A	43.0	B	14.1	A	6.4	A	1.2	A
Aerospace Product and Parts Manufacturing	88.7	A	45.8	B	31.1	B	6.6	A	6.0	A	10.6	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	98.3	A	37.8	B	38.9	B	10.3	B	8.3	B	4.7	A
Furniture and Related Products Manufacturing	95.1	A	36.4	A	32.7	A	18.4	A	10.4	A	2.1	A
Miscellaneous Manufacturing	92.4	A	35.2	B	35.0	B	20.5	B	6.8	A	2.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.2
Competitive Environment
Competitive Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Production technologies change rapidly												
Total Manufacturing Industries	98.7	A	5.2	A	20.3	A	30.7	A	27.6	A	16.1	A
Food Manufacturing	99.5	A	5.1	A	22.5	A	29.5	A	29.0	A	13.9	A
Beverage and Tobacco Product Manufacturing	100.0	A	5.3	A	25.2	A	24.6	A	30.3	A	14.6	A
Textile Mills	98.4	A	5.4	A	23.4	A	28.6	A	26.1	A	16.5	A
Textile Product Mills	98.2	A	4.5	A	26.5	B	34.3	B	24.9	B	9.8	A
Clothing Manufacturing	95.8	A	7.5	A	18.5	A	33.5	A	25.7	A	14.8	A
Leather and Allied Product Manufacturing	98.2	A	5.5	A	21.4	B	21.1	B	41.6	B	10.4	A
Sawmills and Wood Preservation	98.9	A	5.2	A	10.4	A	19.8	A	38.9	A	25.8	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	4.7	A	19.4	B	24.3	B	35.0	B	16.6	A
Other Wood Product Manufacturing	98.5	A	3.2	A	21.8	A	35.3	A	30.2	A	9.6	A
Paper Manufacturing	100.0	A	6.7	A	17.3	A	40.7	A	24.0	A	11.3	A
Printing and Related Support Activities	99.5	A	2.2	A	8.1	A	22.5	A	26.3	B	41.0	B
Petroleum and Coal Products Manufacturing	95.1	A	5.1	A	38.5	A	35.9	A	17.9	A	2.6	A
Chemical Manufacturing (excluding 3254)	100.0	A	9.6	A	26.2	A	29.1	A	26.4	A	8.7	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	6.5	A	21.9	A	15.4	A	34.2	B	21.9	A
Plastics and Rubber Products Manufacturing	98.4	A	2.0	A	19.1	A	34.6	A	34.7	A	9.6	A
Non-Metallic Mineral Products Manufacturing	99.4	A	6.9	A	29.6	A	27.2	A	21.8	A	14.5	A
Primary Metal Manufacturing	100.0	A	7.7	A	26.7	A	36.6	A	17.5	A	11.5	A
Fabricated Metal Product Manufacturing	99.3	A	6.0	A	22.7	A	30.3	A	28.0	A	12.9	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.5	A	6.2	A	15.3	A	41.3	A	25.1	A	12.1	A
Machinery Manufacturing (excluding 3331 & 3332)	98.1	A	5.5	A	19.9	A	27.9	A	26.1	A	20.6	A
Computer and Peripheral Equipment Manufacturing	100.0	A	2.9	A	5.0	A	41.9	B	28.9	B	21.3	A
Communications Equipment Manufacturing	100.0	A	5.5	A	12.8	A	29.6	B	23.2	A	28.9	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	94.6	A	4.7	A	11.6	A	32.0	B	33.1	B	18.6	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	97.1	A	1.9	A	17.6	A	28.8	B	33.9	B	17.8	A
Electrical Equipment, Appliance and Component Manufacturing	98.3	A	5.8	A	21.9	A	40.4	A	22.0	A	10.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.1	A	4.2	A	21.9	A	26.9	A	33.6	B	13.5	A
Aerospace Product and Parts Manufacturing	100.0	A	0.0	A	30.6	B	24.6	B	22.0	B	22.8	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	96.2	A	3.9	A	24.2	B	32.6	B	23.4	B	15.9	B
Furniture and Related Products Manufacturing	98.5	A	4.3	A	17.6	A	31.1	A	27.8	A	19.2	A
Miscellaneous Manufacturing	96.2	A	6.6	A	21.5	A	37.4	B	22.4	B	12.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.2
Competitive Environment
Competitive Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Office technologies change rapidly												
Total Manufacturing Industries	98.0	A	1.8	A	7.6	A	24.3	A	38.4	A	27.9	A
Food Manufacturing	97.3	A	1.0	A	6.9	A	24.3	A	39.8	A	28.0	A
Beverage and Tobacco Product Manufacturing	100.0	A	3.0	A	7.2	A	13.3	A	55.8	A	20.7	A
Textile Mills	95.4	A	0.8	A	4.6	A	26.6	A	28.5	A	39.5	A
Textile Product Mills	98.2	A	4.1	A	5.7	A	24.3	B	26.5	B	39.5	B
Clothing Manufacturing	96.3	A	4.0	A	4.9	A	24.3	A	35.4	A	31.4	A
Leather and Allied Product Manufacturing	98.2	A	0.0	A	1.8	A	17.1	B	52.6	B	28.4	B
Sawmills and Wood Preservation	97.9	A	1.8	A	6.1	A	18.9	A	37.9	A	35.3	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	0.0	A	8.0	A	29.5	B	36.1	B	26.4	B
Other Wood Product Manufacturing	98.1	A	0.0	A	8.9	A	16.9	A	38.1	A	36.0	A
Paper Manufacturing	99.1	A	2.3	A	7.0	A	21.2	A	37.9	A	31.6	A
Printing and Related Support Activities	99.5	A	1.2	A	5.4	A	30.0	B	34.9	B	28.5	B
Petroleum and Coal Products Manufacturing	100.0	A	2.4	A	7.3	A	26.8	A	34.1	A	29.3	A
Chemical Manufacturing (excluding 3254)	99.7	A	2.1	A	9.3	A	19.3	A	43.8	A	25.5	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	1.9	A	5.8	A	21.3	A	45.3	B	25.7	A
Plastics and Rubber Products Manufacturing	98.6	A	1.7	A	8.6	A	22.3	A	44.4	A	23.0	A
Non-Metallic Mineral Products Manufacturing	96.7	A	1.3	A	5.1	A	24.3	A	37.4	A	32.0	A
Primary Metal Manufacturing	98.6	A	2.5	A	10.4	A	17.5	A	38.1	A	31.5	A
Fabricated Metal Product Manufacturing	98.7	A	3.0	A	7.8	A	25.4	A	36.8	A	27.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.0	A	0.7	A	2.6	A	29.3	A	40.9	A	26.5	A
Machinery Manufacturing (excluding 3331 & 3332)	95.7	A	1.8	A	5.5	A	26.4	A	35.1	B	31.3	A
Computer and Peripheral Equipment Manufacturing	100.0	A	0.0	A	7.6	A	31.8	B	32.6	B	28.1	B
Communications Equipment Manufacturing	98.2	A	0.0	A	16.8	A	15.6	A	51.2	B	16.4	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	0.0	A	6.7	A	43.8	B	35.3	B	14.1	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	93.1	A	4.2	A	7.7	A	25.4	B	42.9	B	19.8	A
Electrical Equipment, Appliance and Component Manufacturing	97.9	A	0.0	A	9.7	A	24.7	A	37.5	A	28.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.9	A	1.4	A	11.5	A	27.0	A	40.6	B	19.5	A
Aerospace Product and Parts Manufacturing	100.0	A	0.0	A	12.0	A	16.7	B	40.0	B	31.3	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	98.3	A	2.9	A	18.8	B	12.1	B	43.2	B	23.0	B
Furniture and Related Products Manufacturing	97.8	A	1.8	A	12.1	A	23.0	A	40.3	A	22.8	A
Miscellaneous Manufacturing	97.3	A	0.5	A	9.3	A	29.9	B	34.2	B	26.1	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries												
My client's demands are easy to predict	97.6	A	7.8	A	23.8	A	36.4	A	24.6	A	7.5	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.2	A	5.4	A	13.7	A	20.6	A	28.2	A	32.1	A
My competitors' actions are easy to predict	97.1	A	7.2	A	27.9	A	41.5	A	19.3	A	4.0	A
The arrival of new competitors is a constant threat	97.9	A	7.3	A	20.0	A	23.2	A	25.1	A	24.4	A
The arrival of competing products (goods or services) is a constant threat	95.6	A	5.0	A	16.0	A	23.6	A	29.9	A	25.5	A
My firm can easily replace its current suppliers	98.5	A	14.3	A	30.4	A	31.0	A	17.8	A	6.6	A
It is difficult to hire qualified staff and workers	98.7	A	3.6	A	10.6	A	23.1	A	32.4	A	30.3	A
It is difficult to retain qualified staff and workers	98.8	A	7.6	A	25.6	A	32.9	A	23.4	A	10.5	A
My products (goods or services) quickly become obsolete	93.9	A	36.6	A	34.5	A	16.7	A	7.3	A	4.9	A
Production technologies change rapidly	97.7	A	6.6	A	22.0	A	31.3	A	25.6	A	14.6	A
Office technologies change rapidly	97.4	A	2.3	A	8.4	A	24.4	A	37.8	A	27.0	A
Food Manufacturing												
My client's demands are easy to predict	96.5	A	5.7	A	24.9	A	37.4	A	24.1	A	7.8	A
My clients can easily substitute my products (goods or services) for the products of my competitors	97.7	A	4.7	A	8.7	A	21.7	A	34.8	A	30.2	A
My competitors' actions are easy to predict	96.5	A	5.3	A	27.2	A	44.8	A	19.3	A	3.3	A
The arrival of new competitors is a constant threat	96.4	A	6.8	A	16.7	A	20.9	A	29.8	A	25.7	A
The arrival of competing products (goods or services) is a constant threat	94.1	A	2.7	A	14.1	A	19.2	A	35.3	A	28.7	A
My firm can easily replace its current suppliers	97.9	A	18.4	A	26.6	A	28.7	A	19.0	A	7.3	A
It is difficult to hire qualified staff and workers	98.2	A	3.4	A	15.6	A	28.6	A	29.9	A	22.5	A
It is difficult to retain qualified staff and workers	98.6	A	6.4	A	24.4	A	33.7	A	23.9	A	11.5	A
My products (goods or services) quickly become obsolete	94.2	A	34.2	A	30.7	A	17.6	A	9.8	A	7.7	A
Production technologies change rapidly	98.5	A	6.6	A	24.1	A	28.8	A	27.3	A	13.2	A
Office technologies change rapidly	96.7	A	1.8	A	8.6	A	25.0	A	36.0	A	28.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Beverage and Tobacco Product Manufacturing												
My client's demands are easy to predict	98.9	A	9.2	A	10.1	A	40.7	A	30.5	A	9.5	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	0.0	A	3.3	A	21.2	A	20.4	A	55.1	A
My competitors' actions are easy to predict	97.8	A	10.2	A	23.6	A	49.8	A	14.1	A	2.3	A
The arrival of new competitors is a constant threat	100.0	A	9.9	A	31.8	A	11.6	A	26.3	A	20.4	A
The arrival of competing products (goods or services) is a constant threat	100.0	A	4.3	A	6.8	A	23.1	A	37.4	A	28.4	A
My firm can easily replace its current suppliers	98.2	A	18.1	A	38.1	A	19.3	A	19.3	A	5.2	A
It is difficult to hire qualified staff and workers	98.9	A	8.9	A	21.6	A	27.4	A	29.4	A	12.7	A
It is difficult to retain qualified staff and workers	98.9	A	11.6	A	28.1	A	31.6	A	19.2	A	9.4	A
My products (goods or services) quickly become obsolete	97.8	A	43.8	A	29.5	A	15.2	A	1.2	A	10.4	A
Production technologies change rapidly	98.2	A	6.4	A	28.7	A	25.2	A	28.2	A	11.4	A
Office technologies change rapidly	100.0	A	2.3	A	6.6	A	18.4	A	42.8	A	29.9	A
Textile Mills												
My client's demands are easy to predict	97.4	A	11.2	A	32.1	A	42.1	A	11.2	A	3.3	A
My clients can easily substitute my products (goods or services) for the products of my competitors	97.4	A	2.6	A	15.8	A	14.9	A	36.1	A	30.7	A
My competitors' actions are easy to predict	97.4	A	7.7	A	37.1	A	37.8	A	13.3	A	4.1	A
The arrival of new competitors is a constant threat	96.7	A	7.9	A	14.9	A	21.5	A	20.3	A	35.5	A
The arrival of competing products (goods or services) is a constant threat	97.4	A	2.6	A	10.1	A	22.1	A	25.7	A	39.5	A
My firm can easily replace its current suppliers	98.1	A	12.4	A	36.2	A	31.2	A	15.7	A	4.5	A
It is difficult to hire qualified staff and workers	98.0	A	4.0	A	6.4	A	25.1	A	30.3	A	34.3	A
It is difficult to retain qualified staff and workers	98.0	A	2.6	A	27.5	A	28.4	A	28.8	A	12.7	A
My products (goods or services) quickly become obsolete	91.2	A	19.0	A	41.6	A	22.6	A	8.9	A	7.9	A
Production technologies change rapidly	98.7	A	6.6	A	24.5	A	28.5	A	24.2	A	16.2	A
Office technologies change rapidly	96.1	A	2.0	A	4.6	A	27.6	A	26.9	A	38.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Textile Product Mills												
My client's demands are easy to predict	100.0	A	12.7	A	22.5	B	35.8	B	23.4	B	5.7	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	12.9	A	15.5	A	12.0	B	34.1	B	25.5	B
My competitors' actions are easy to predict	99.2	A	11.4	A	36.7	B	36.2	B	9.9	A	5.8	A
The arrival of new competitors is a constant threat	100.0	A	4.7	A	17.3	B	31.7	B	17.2	B	29.1	B
The arrival of competing products (goods or services) is a constant threat	96.7	A	3.2	A	8.3	A	27.3	B	31.9	B	29.2	B
My firm can easily replace its current suppliers	100.0	A	12.7	B	48.4	B	19.5	A	15.2	A	4.1	A
It is difficult to hire qualified staff and workers	100.0	A	0.0	A	7.5	A	23.6	B	43.8	B	25.2	A
It is difficult to retain qualified staff and workers	100.0	A	3.1	A	26.5	B	41.8	B	19.5	B	9.0	A
My products (goods or services) quickly become obsolete	98.5	A	16.7	B	53.7	B	16.2	A	11.9	A	1.6	A
Production technologies change rapidly	98.5	A	5.3	A	26.8	A	36.6	B	23.1	B	8.2	A
Office technologies change rapidly	98.5	A	3.4	A	4.8	A	24.4	B	27.8	B	39.7	B
Clothing Manufacturing												
My client's demands are easy to predict	95.6	A	12.9	A	23.2	A	38.0	A	18.1	A	7.9	A
My clients can easily substitute my products (goods or services) for the products of my competitors	97.2	A	6.6	A	8.7	A	31.1	A	24.7	A	29.0	A
My competitors' actions are easy to predict	95.8	A	8.7	A	29.3	A	42.3	A	17.6	A	2.0	A
The arrival of new competitors is a constant threat	94.8	A	6.9	A	14.5	A	22.4	A	30.9	A	25.3	A
The arrival of competing products (goods or services) is a constant threat	96.2	A	4.8	A	11.5	A	18.4	A	39.1	A	26.2	A
My firm can easily replace its current suppliers	97.6	A	10.6	A	26.9	A	40.8	A	15.7	A	6.1	A
It is difficult to hire qualified staff and workers	96.5	A	3.7	A	9.1	A	23.2	A	29.7	A	34.4	A
It is difficult to retain qualified staff and workers	96.8	A	9.1	A	19.1	A	36.0	A	23.3	A	12.5	A
My products (goods or services) quickly become obsolete	93.3	A	23.9	A	25.1	A	22.2	A	14.8	A	14.1	A
Production technologies change rapidly	95.0	A	9.3	A	20.2	A	34.8	A	23.0	A	12.7	A
Office technologies change rapidly	95.1	A	5.4	A	6.4	A	25.7	A	33.7	A	28.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Leather and Allied Product Manufacturing												
My client's demands are easy to predict	100.0	A	16.9	B	17.3	A	39.0	B	12.1	A	14.7	B
My clients can easily substitute my products (goods or services) for the products of my competitors	98.7	A	13.6	A	9.9	A	22.6	B	28.7	B	25.2	B
My competitors' actions are easy to predict	98.7	A	9.6	A	36.2	B	35.3	B	18.9	B	0.0	A
The arrival of new competitors is a constant threat	98.7	A	3.9	A	15.1	B	14.3	A	25.7	B	41.0	B
The arrival of competing products (goods or services) is a constant threat	98.7	A	0.0	A	7.7	A	22.4	B	20.8	B	49.1	B
My firm can easily replace its current suppliers	94.8	A	13.7	A	42.0	B	31.5	B	6.4	A	6.4	A
It is difficult to hire qualified staff and workers	98.7	A	0.0	A	1.3	A	34.0	B	31.1	B	33.6	B
It is difficult to retain qualified staff and workers	98.7	A	3.7	A	14.9	A	40.6	B	25.0	B	15.8	A
My products (goods or services) quickly become obsolete	96.1	A	30.6	B	33.3	B	16.7	A	9.2	A	10.1	A
Production technologies change rapidly	97.4	A	9.1	A	18.2	B	21.1	B	40.2	B	11.3	A
Office technologies change rapidly	97.4	A	6.4	B	5.1	A	12.4	A	46.7	B	29.3	B
Sawmills and Wood Preservation												
My client's demands are easy to predict	94.5	A	5.8	A	14.6	A	40.5	A	25.6	A	13.5	A
My clients can easily substitute my products (goods or services) for the products of my competitors	96.3	A	3.0	A	9.3	A	19.6	A	22.4	A	45.7	A
My competitors' actions are easy to predict	95.4	A	8.3	A	21.6	A	45.0	A	18.6	A	6.5	A
The arrival of new competitors is a constant threat	95.6	A	5.1	A	20.6	A	25.6	A	20.0	A	28.7	A
The arrival of competing products (goods or services) is a constant threat	95.6	A	2.2	A	15.6	A	27.8	A	24.2	A	30.2	A
My firm can easily replace its current suppliers	95.2	A	29.1	A	24.5	A	23.2	A	15.7	A	7.5	A
It is difficult to hire qualified staff and workers	98.3	A	5.7	A	10.1	A	29.7	A	30.4	A	24.1	A
It is difficult to retain qualified staff and workers	95.6	A	9.3	A	22.4	A	30.2	A	24.4	A	13.6	A
My products (goods or services) quickly become obsolete	89.4	A	44.9	A	32.2	A	12.5	A	7.9	A	2.6	A
Production technologies change rapidly	96.8	A	6.1	A	12.9	A	22.6	A	37.0	A	21.3	A
Office technologies change rapidly	95.1	A	1.8	A	7.1	A	23.3	A	36.0	A	31.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Veneer, Plywood and Engineered Wood Product Manufacturing												
My client's demands are easy to predict	97.8	A	3.7	A	13.6	A	37.6	A	25.0	A	20.1	A
My clients can easily substitute my products (goods or services) for the products of my competitors	97.8	A	2.2	A	15.0	A	17.0	A	22.1	A	43.6	B
My competitors' actions are easy to predict	96.7	A	7.5	A	22.2	A	46.0	B	21.9	A	2.5	A
The arrival of new competitors is a constant threat	100.0	A	4.2	A	22.4	A	27.2	A	20.3	A	25.8	A
The arrival of competing products (goods or services) is a constant threat	97.2	A	2.2	A	17.8	A	19.6	A	36.2	B	24.2	A
My firm can easily replace its current suppliers	98.9	A	25.3	A	31.4	A	20.9	A	12.8	A	9.6	A
It is difficult to hire qualified staff and workers	98.2	A	4.2	A	15.1	A	19.5	A	39.0	A	22.2	A
It is difficult to retain qualified staff and workers	98.2	A	9.4	A	26.3	A	30.0	A	26.8	A	7.4	A
My products (goods or services) quickly become obsolete	94.2	A	51.6	B	28.3	A	12.4	A	5.9	A	1.9	A
Production technologies change rapidly	100.0	A	4.1	A	25.0	A	29.6	A	26.8	A	14.5	A
Office technologies change rapidly	100.0	A	0.0	A	6.1	A	25.1	A	43.6	A	25.3	A
Other Wood Product Manufacturing												
My client's demands are easy to predict	99.6	A	7.8	A	16.6	A	41.8	A	26.2	A	7.6	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.6	A	5.2	A	12.4	A	19.5	A	19.3	A	43.5	A
My competitors' actions are easy to predict	96.5	A	6.1	A	28.4	A	42.7	A	18.0	A	4.7	A
The arrival of new competitors is a constant threat	95.1	A	9.1	A	14.2	A	15.6	A	22.5	A	38.6	A
The arrival of competing products (goods or services) is a constant threat	96.3	A	3.5	A	11.1	A	27.3	A	28.7	A	29.5	A
My firm can easily replace its current suppliers	99.1	A	11.2	A	28.7	A	27.6	A	21.6	A	10.8	A
It is difficult to hire qualified staff and workers	98.8	A	3.0	A	12.8	A	23.1	A	34.0	A	27.2	A
It is difficult to retain qualified staff and workers	96.7	A	5.3	A	28.6	A	34.9	A	21.8	A	9.4	A
My products (goods or services) quickly become obsolete	92.2	A	42.6	A	34.5	A	13.2	A	4.9	A	4.8	A
Production technologies change rapidly	96.5	A	6.9	A	24.7	A	35.2	A	24.3	A	9.0	A
Office technologies change rapidly	97.8	A	2.0	A	8.2	A	17.1	A	38.9	A	33.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Paper Manufacturing												
My client's demands are easy to predict	98.9	A	2.5	A	17.1	A	38.1	A	35.6	A	6.7	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.3	A	2.7	A	9.0	A	14.3	A	35.5	A	38.5	A
My competitors' actions are easy to predict	99.3	A	5.3	A	22.8	A	41.5	A	26.0	A	4.3	A
The arrival of new competitors is a constant threat	98.6	A	11.3	A	24.8	A	19.5	A	23.3	A	21.1	A
The arrival of competing products (goods or services) is a constant threat	98.9	A	7.0	A	19.4	A	23.1	A	26.6	A	23.9	A
My firm can easily replace its current suppliers	99.6	A	12.1	A	32.7	A	33.5	A	17.3	A	4.4	A
It is difficult to hire qualified staff and workers	98.2	A	7.7	A	19.4	A	20.7	A	33.4	A	18.8	A
It is difficult to retain qualified staff and workers	98.5	A	12.8	A	35.0	A	26.8	A	17.4	A	8.1	A
My products (goods or services) quickly become obsolete	96.6	A	42.0	A	39.4	A	10.0	A	4.7	A	4.0	A
Production technologies change rapidly	99.1	A	7.8	A	21.6	A	37.1	A	23.5	A	9.9	A
Office technologies change rapidly	98.9	A	3.6	A	7.7	A	22.7	A	36.2	A	30.0	A
Printing and Related Support Activities												
My client's demands are easy to predict	98.9	A	6.0	A	25.9	A	35.2	A	26.2	A	6.8	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.2	A	4.8	A	9.9	A	20.1	A	28.5	A	36.6	A
My competitors' actions are easy to predict	97.4	A	7.6	A	21.2	A	37.2	B	26.3	A	7.7	A
The arrival of new competitors is a constant threat	99.3	A	4.0	A	24.0	A	23.9	A	23.9	A	24.2	A
The arrival of competing products (goods or services) is a constant threat	95.2	A	3.3	A	12.0	A	29.2	A	29.5	A	26.0	A
My firm can easily replace its current suppliers	99.6	A	7.5	A	27.1	A	33.1	A	20.9	A	11.4	A
It is difficult to hire qualified staff and workers	98.7	A	4.8	A	7.5	A	17.5	A	33.0	A	37.1	A
It is difficult to retain qualified staff and workers	99.6	A	12.7	A	27.6	A	27.2	A	27.3	A	5.2	A
My products (goods or services) quickly become obsolete	86.8	A	24.5	A	28.0	A	24.4	A	13.2	A	9.9	A
Production technologies change rapidly	99.4	A	2.1	A	8.3	A	22.9	A	26.7	A	40.0	A
Office technologies change rapidly	99.4	A	1.0	A	5.5	A	27.8	A	37.8	A	27.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing												
My client's demands are easy to predict	96.3	A	7.7	A	7.7	A	39.4	A	30.8	A	14.4	A
My clients can easily substitute my products (goods or services) for the products of my competitors	90.7	A	4.1	A	4.1	A	14.3	A	28.6	A	49.0	A
My competitors' actions are easy to predict	100.0	A	5.6	A	23.1	A	44.4	A	25.0	A	1.9	A
The arrival of new competitors is a constant threat	96.3	A	15.4	A	25.0	A	18.3	A	24.0	A	17.3	A
The arrival of competing products (goods or services) is a constant threat	94.4	A	3.9	A	21.6	A	21.6	A	39.2	A	13.7	A
My firm can easily replace its current suppliers	98.1	A	14.2	A	26.4	A	23.6	A	24.5	A	11.3	A
It is difficult to hire qualified staff and workers	98.1	A	0.0	A	5.7	A	42.5	A	40.6	A	11.3	A
It is difficult to retain qualified staff and workers	98.1	A	1.9	A	40.6	A	41.5	A	16.0	A	0.0	A
My products (goods or services) quickly become obsolete	90.7	A	53.1	A	22.4	A	6.1	A	14.3	A	4.1	A
Production technologies change rapidly	94.4	A	3.9	A	36.3	A	37.3	A	20.6	A	2.0	A
Office technologies change rapidly	98.1	A	1.9	A	7.5	A	24.5	A	41.5	A	24.5	A
Chemical Manufacturing (excluding 3254)												
My client's demands are easy to predict	98.1	A	5.9	A	21.5	A	32.8	A	31.0	A	8.7	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.7	A	2.6	A	17.7	A	19.2	A	31.9	A	28.7	A
My competitors' actions are easy to predict	98.8	A	4.6	A	29.0	A	44.8	A	19.8	A	1.8	A
The arrival of new competitors is a constant threat	98.3	A	6.5	A	23.6	A	24.0	A	27.2	A	18.7	A
The arrival of competing products (goods or services) is a constant threat	97.9	A	5.2	A	19.1	A	24.3	A	31.2	A	20.2	A
My firm can easily replace its current suppliers	99.2	A	11.7	A	32.2	A	35.7	A	15.0	A	5.3	A
It is difficult to hire qualified staff and workers	99.2	A	3.8	A	19.4	A	30.6	A	31.4	A	14.8	A
It is difficult to retain qualified staff and workers	98.9	A	10.7	A	33.6	A	29.1	A	23.4	A	3.3	A
My products (goods or services) quickly become obsolete	98.1	A	32.7	A	39.8	A	18.3	A	7.4	A	1.8	A
Production technologies change rapidly	99.5	A	10.4	A	27.8	A	28.1	A	25.3	A	8.5	A
Office technologies change rapidly	99.5	A	1.8	A	9.5	A	19.8	A	45.0	A	23.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Pharmaceutical and Medicine Manufacturing (3254)												
My client's demands are easy to predict	96.8	A	6.1	A	10.4	A	49.0	A	30.9	A	3.6	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	3.2	A	14.8	A	16.8	A	38.1	A	27.0	A
My competitors' actions are easy to predict	98.4	A	1.6	A	30.4	A	43.7	A	21.5	A	2.7	A
The arrival of new competitors is a constant threat	98.4	A	7.9	A	19.4	A	9.7	A	38.4	B	24.6	A
The arrival of competing products (goods or services) is a constant threat	98.4	A	1.6	A	5.1	A	20.2	A	40.7	A	32.4	A
My firm can easily replace its current suppliers	98.4	A	25.3	A	32.8	A	25.4	B	5.1	A	11.3	A
It is difficult to hire qualified staff and workers	100.0	A	1.6	A	12.0	A	27.2	A	34.3	A	24.9	A
It is difficult to retain qualified staff and workers	100.0	A	6.7	A	29.1	B	30.8	A	22.2	A	11.2	A
My products (goods or services) quickly become obsolete	96.8	A	24.4	A	39.7	A	28.7	B	4.4	A	2.8	A
Production technologies change rapidly	98.4	A	7.6	A	21.7	A	16.8	A	31.8	A	22.0	A
Office technologies change rapidly	100.0	A	1.6	A	7.5	A	21.6	A	42.8	B	26.5	A
Plastics and Rubber Products Manufacturing												
My client's demands are easy to predict	99.4	A	4.8	A	22.4	A	42.1	A	24.4	A	6.2	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.9	A	6.4	A	16.6	A	20.5	A	28.4	A	28.1	A
My competitors' actions are easy to predict	99.4	A	4.8	A	31.3	A	40.3	A	19.9	A	3.8	A
The arrival of new competitors is a constant threat	98.7	A	5.4	A	20.6	A	26.3	A	27.8	A	19.8	A
The arrival of competing products (goods or services) is a constant threat	97.6	A	4.0	A	14.9	A	22.8	A	32.7	A	25.6	A
My firm can easily replace its current suppliers	99.5	A	15.2	A	30.8	A	32.7	A	16.9	A	4.3	A
It is difficult to hire qualified staff and workers	98.8	A	4.0	A	11.9	A	19.0	A	27.7	A	37.5	A
It is difficult to retain qualified staff and workers	99.2	A	7.2	A	25.7	A	29.1	A	25.5	A	12.5	A
My products (goods or services) quickly become obsolete	96.2	A	32.0	A	43.5	A	14.0	A	5.0	A	5.4	A
Production technologies change rapidly	98.0	A	2.3	A	22.6	A	34.9	A	30.6	A	9.7	A
Office technologies change rapidly	98.5	A	1.5	A	9.5	A	23.0	A	43.8	A	22.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Non-Metallic Mineral Products Manufacturing												
My client's demands are easy to predict	93.5	A	3.2	A	19.4	A	37.9	A	28.9	A	10.6	A
My clients can easily substitute my products (goods or services) for the products of my competitors	97.5	A	6.6	A	10.5	A	16.2	A	30.9	A	35.8	A
My competitors' actions are easy to predict	96.5	A	7.3	A	26.9	A	39.0	A	22.9	A	3.9	A
The arrival of new competitors is a constant threat	97.0	A	9.4	A	22.2	A	21.4	A	19.0	A	28.0	A
The arrival of competing products (goods or services) is a constant threat	96.5	A	7.4	A	19.5	A	21.8	A	24.3	A	27.0	A
My firm can easily replace its current suppliers	98.1	A	14.6	A	29.0	A	28.0	A	16.8	A	11.5	A
It is difficult to hire qualified staff and workers	98.5	A	3.7	A	16.2	A	26.7	A	32.9	A	20.5	A
It is difficult to retain qualified staff and workers	98.9	A	13.7	A	28.5	A	29.3	A	16.4	A	12.1	A
My products (goods or services) quickly become obsolete	92.9	A	55.1	A	29.6	A	7.8	A	5.0	A	2.5	A
Production technologies change rapidly	97.9	A	7.4	A	31.3	A	30.4	A	19.3	A	11.5	A
Office technologies change rapidly	96.5	A	1.6	A	7.5	A	24.4	A	38.5	A	27.9	A
Primary Metal Manufacturing												
My client's demands are easy to predict	98.4	A	5.4	A	25.1	A	37.6	A	25.9	A	6.1	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	4.3	A	12.1	A	21.9	A	27.6	A	34.1	A
My competitors' actions are easy to predict	98.6	A	7.8	A	32.3	A	43.2	A	14.6	A	2.1	A
The arrival of new competitors is a constant threat	98.3	A	8.0	A	24.3	A	21.8	A	28.4	A	17.5	A
The arrival of competing products (goods or services) is a constant threat	92.6	A	5.7	A	17.0	A	20.4	A	37.1	A	19.8	A
My firm can easily replace its current suppliers	100.0	A	17.3	A	37.9	A	22.8	A	16.4	A	5.7	A
It is difficult to hire qualified staff and workers	100.0	A	2.2	A	15.0	A	29.0	A	22.1	A	31.6	A
It is difficult to retain qualified staff and workers	100.0	A	11.4	A	27.3	A	31.7	A	21.1	A	8.5	A
My products (goods or services) quickly become obsolete	92.0	A	44.4	A	39.2	A	11.4	A	2.6	A	2.5	A
Production technologies change rapidly	98.6	A	8.7	A	29.1	A	34.4	A	15.6	A	12.3	A
Office technologies change rapidly	98.9	A	1.9	A	11.8	A	15.9	A	39.9	A	30.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing												
My client's demands are easy to predict	97.4	A	10.0	A	24.2	A	33.0	A	23.8	A	9.0	A
My clients can easily substitute my products (goods or services) for the products of my competitors	97.8	A	5.5	A	13.2	A	23.3	A	22.3	A	35.7	A
My competitors' actions are easy to predict	96.4	A	7.4	A	23.8	A	41.7	A	19.5	A	7.6	A
The arrival of new competitors is a constant threat	98.8	A	7.1	A	18.1	A	24.0	A	25.4	A	25.5	A
The arrival of competing products (goods or services) is a constant threat	94.3	A	7.0	A	19.2	A	27.4	A	23.3	A	23.0	A
My firm can easily replace its current suppliers	98.0	A	18.0	A	27.3	A	29.6	A	19.4	A	5.7	A
It is difficult to hire qualified staff and workers	98.4	A	1.9	A	5.2	A	23.2	A	31.7	A	38.0	A
It is difficult to retain qualified staff and workers	98.8	A	5.9	A	27.5	A	36.9	A	18.8	A	11.0	A
My products (goods or services) quickly become obsolete	93.9	A	50.9	A	30.4	A	12.7	A	3.2	A	2.7	A
Production technologies change rapidly	96.3	A	9.2	A	23.4	A	30.9	A	25.1	A	11.4	A
Office technologies change rapidly	97.6	A	3.0	A	9.6	A	25.9	A	36.0	A	25.5	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)												
My client's demands are easy to predict	100.0	A	9.1	A	33.3	A	35.4	A	18.8	A	3.4	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.5	A	3.0	A	17.8	A	18.4	A	30.9	A	29.9	A
My competitors' actions are easy to predict	97.5	A	5.3	A	27.8	A	40.4	A	23.3	A	3.3	A
The arrival of new competitors is a constant threat	99.0	A	7.9	A	19.7	A	22.9	A	22.3	A	27.2	A
The arrival of competing products (goods or services) is a constant threat	97.1	A	4.4	A	14.2	A	25.2	A	33.2	A	23.0	A
My firm can easily replace its current suppliers	100.0	A	11.6	A	29.4	A	34.2	A	18.6	A	6.2	A
It is difficult to hire qualified staff and workers	98.7	A	3.2	A	11.0	A	20.3	A	33.2	A	32.3	A
It is difficult to retain qualified staff and workers	99.0	A	3.2	A	23.0	A	39.5	A	21.0	A	13.4	A
My products (goods or services) quickly become obsolete	98.6	A	36.8	A	40.5	A	17.9	A	2.0	A	2.8	A
Production technologies change rapidly	99.5	A	6.4	A	18.4	A	40.3	A	23.1	A	11.7	A
Office technologies change rapidly	98.7	A	1.1	A	2.8	A	28.8	A	41.4	A	26.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)												
My client's demands are easy to predict	97.2	A	8.9	A	29.7	A	36.1	A	20.1	A	5.2	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.2	A	4.2	A	16.9	A	20.0	A	30.5	A	28.5	A
My competitors' actions are easy to predict	98.1	A	10.8	A	29.2	A	42.1	A	14.7	A	3.2	A
The arrival of new competitors is a constant threat	98.4	A	7.9	A	18.0	A	31.1	A	22.1	A	20.9	A
The arrival of competing products (goods or services) is a constant threat	95.8	A	5.7	A	20.5	A	26.5	A	24.9	A	22.4	A
My firm can easily replace its current suppliers	98.7	A	8.8	A	26.2	A	32.8	A	24.0	A	8.3	A
It is difficult to hire qualified staff and workers	99.4	A	3.5	A	8.0	A	14.1	A	35.0	A	39.5	A
It is difficult to retain qualified staff and workers	99.3	A	7.7	A	22.6	A	34.1	A	27.7	A	7.9	A
My products (goods or services) quickly become obsolete	93.2	A	35.9	A	36.5	A	18.6	A	4.9	A	4.2	A
Production technologies change rapidly	98.1	A	7.7	A	20.1	A	28.8	A	24.9	A	18.6	A
Office technologies change rapidly	95.8	A	2.4	A	6.8	A	25.8	A	35.5	A	29.5	A
Computer and Peripheral Equipment Manufacturing												
My client's demands are easy to predict	93.3	A	7.1	A	46.8	B	26.0	B	20.0	B	0.0	A
My clients can easily substitute my products (goods or services) for the products of my competitors	93.3	A	6.0	B	26.4	B	17.3	A	33.3	B	17.1	A
My competitors' actions are easy to predict	95.6	A	18.0	B	23.3	B	38.8	B	14.7	B	5.2	A
The arrival of new competitors is a constant threat	95.6	A	9.7	A	17.2	B	18.6	B	29.3	B	25.2	B
The arrival of competing products (goods or services) is a constant threat	95.6	A	4.7	A	7.9	B	10.5	A	41.9	B	35.1	B
My firm can easily replace its current suppliers	95.6	A	19.8	A	42.4	B	9.3	A	17.6	B	10.9	B
It is difficult to hire qualified staff and workers	97.8	A	5.3	B	4.5	A	37.3	B	14.4	B	38.4	B
It is difficult to retain qualified staff and workers	97.8	A	4.5	A	8.0	B	39.4	B	41.3	B	6.8	A
My products (goods or services) quickly become obsolete	97.8	A	7.8	B	27.1	B	22.0	B	26.5	B	16.7	B
Production technologies change rapidly	100.0	A	2.8	A	4.8	A	42.2	B	27.6	B	22.6	A
Office technologies change rapidly	100.0	A	0.0	A	7.2	A	32.6	B	31.1	B	29.1	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Communications Equipment Manufacturing												
My client's demands are easy to predict	98.1	A	1.5	A	34.0	B	38.9	B	22.4	A	3.1	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.5	A	3.5	A	28.6	B	17.3	A	27.9	A	22.7	B
My competitors' actions are easy to predict	100.0	A	1.5	A	46.9	B	37.8	B	9.8	A	3.9	A
The arrival of new competitors is a constant threat	100.0	A	6.5	A	28.1	B	19.9	A	29.3	B	16.2	A
The arrival of competing products (goods or services) is a constant threat	95.3	A	3.2	A	20.1	B	9.5	A	32.3	A	35.0	B
My firm can easily replace its current suppliers	100.0	A	7.8	A	30.6	B	41.8	B	12.5	A	7.3	A
It is difficult to hire qualified staff and workers	100.0	A	6.9	A	5.4	A	21.6	A	34.2	B	31.9	B
It is difficult to retain qualified staff and workers	100.0	A	5.3	A	18.6	A	38.9	B	23.0	A	14.3	A
My products (goods or services) quickly become obsolete	95.5	A	16.6	B	37.5	B	33.8	A	12.0	A	0.0	A
Production technologies change rapidly	100.0	A	6.6	A	17.2	A	28.6	A	21.3	A	26.4	B
Office technologies change rapidly	96.8	A	0.0	A	15.6	A	14.5	A	53.2	B	16.8	A
Audio and Video Equipment Manufacturing												
My client's demands are easy to predict	x	A	x	A	x	A	x	A	x	A	x	A
My clients can easily substitute my products (goods or services) for the products of my competitors	x	A	x	A	x	A	x	A	x	A	x	A
My competitors' actions are easy to predict	x	A	x	A	x	A	x	A	x	A	x	A
The arrival of new competitors is a constant threat	x	A	x	A	x	A	x	A	x	A	x	A
The arrival of competing products (goods or services) is a constant threat	x	A	x	A	x	A	x	A	x	A	x	A
My firm can easily replace its current suppliers	x	A	x	A	x	A	x	A	x	A	x	A
It is difficult to hire qualified staff and workers	x	A	x	A	x	A	x	A	x	A	x	A
It is difficult to retain qualified staff and workers	x	A	x	A	x	A	x	A	x	A	x	A
My products (goods or services) quickly become obsolete	x	A	x	A	x	A	x	A	x	A	x	A
Production technologies change rapidly	x	A	x	A	x	A	x	A	x	A	x	A
Office technologies change rapidly	x	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing												
My client's demands are easy to predict	100.0	A	8.5	A	46.3	B	24.6	B	18.4	B	2.2	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	4.1	A	37.4	B	19.1	A	11.4	A	28.1	B
My competitors' actions are easy to predict	100.0	A	9.4	A	45.9	B	29.2	B	15.4	A	0.0	A
The arrival of new competitors is a constant threat	100.0	A	4.2	A	15.8	A	32.0	B	23.1	A	24.9	B
The arrival of competing products (goods or services) is a constant threat	98.0	A	2.1	A	18.1	A	18.0	B	38.5	B	23.3	B
My firm can easily replace its current suppliers	100.0	A	12.8	A	30.2	B	23.9	A	19.8	B	13.4	A
It is difficult to hire qualified staff and workers	100.0	A	2.2	A	5.1	A	14.7	A	44.4	B	33.7	B
It is difficult to retain qualified staff and workers	100.0	A	4.3	A	8.3	A	51.8	B	20.8	B	14.8	A
My products (goods or services) quickly become obsolete	98.0	A	10.7	A	34.6	B	25.8	B	24.6	A	4.3	A
Production technologies change rapidly	94.9	A	4.4	A	11.0	A	30.2	B	36.7	B	17.6	B
Office technologies change rapidly	100.0	A	0.0	A	6.4	A	41.6	B	38.6	B	13.4	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media												
My client's demands are easy to predict	100.0	A	16.5	A	25.1	A	28.0	A	27.9	B	2.5	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	13.2	A	25.3	A	13.8	A	25.0	A	22.8	B
My competitors' actions are easy to predict	98.2	A	6.8	A	30.0	A	44.7	B	17.6	A	0.8	A
The arrival of new competitors is a constant threat	99.0	A	7.8	A	20.9	A	29.4	B	17.3	A	24.7	B
The arrival of competing products (goods or services) is a constant threat	93.6	A	4.4	A	14.9	A	25.7	A	27.1	A	27.9	B
My firm can easily replace its current suppliers	99.2	A	17.2	A	31.7	B	27.4	B	19.1	A	4.6	A
It is difficult to hire qualified staff and workers	100.0	A	2.5	A	15.4	A	22.9	A	39.7	B	19.5	A
It is difficult to retain qualified staff and workers	100.0	A	4.9	A	18.1	A	30.4	B	37.8	B	8.8	A
My products (goods or services) quickly become obsolete	96.3	A	20.3	A	41.6	B	24.7	B	10.7	A	2.7	A
Production technologies change rapidly	97.3	A	3.6	A	19.6	A	27.3	B	32.4	B	17.1	A
Office technologies change rapidly	93.7	A	4.7	A	8.1	A	23.0	A	42.7	B	21.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Electrical Equipment, Appliance and Component Manufacturing												
My client's demands are easy to predict	99.3	A	8.0	A	27.1	A	40.9	A	22.2	A	1.9	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.3	A	4.5	A	11.1	A	23.4	A	34.1	A	26.9	A
My competitors' actions are easy to predict	100.0	A	11.3	A	27.7	A	37.7	A	21.1	A	2.2	A
The arrival of new competitors is a constant threat	100.0	A	9.6	A	21.6	A	21.6	A	25.6	A	21.7	A
The arrival of competing products (goods or services) is a constant threat	99.3	A	5.7	A	14.9	A	23.6	A	29.9	A	25.9	A
My firm can easily replace its current suppliers	98.8	A	12.3	A	40.6	A	31.1	A	15.5	A	0.5	A
It is difficult to hire qualified staff and workers	99.3	A	5.0	A	15.4	A	21.2	A	32.4	A	26.1	A
It is difficult to retain qualified staff and workers	99.3	A	5.9	A	32.2	A	29.3	A	24.3	A	8.4	A
My products (goods or services) quickly become obsolete	98.8	A	27.2	A	39.4	A	23.6	A	7.2	A	2.6	A
Production technologies change rapidly	98.4	A	7.1	A	22.2	A	42.0	A	19.7	A	9.0	A
Office technologies change rapidly	98.1	A	0.7	A	10.8	A	24.8	A	36.3	A	27.4	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing												
My client's demands are easy to predict	96.9	A	3.7	A	18.3	A	40.9	A	27.6	A	9.6	A
My clients can easily substitute my products (goods or services) for the products of my competitors	96.4	A	9.3	A	20.7	A	18.4	A	24.9	A	26.7	A
My competitors' actions are easy to predict	96.2	A	5.9	A	29.4	A	43.7	A	17.7	A	3.4	A
The arrival of new competitors is a constant threat	97.9	A	6.9	A	27.7	A	17.1	A	31.2	A	17.1	A
The arrival of competing products (goods or services) is a constant threat	92.0	A	4.7	A	22.0	A	20.1	A	33.4	A	19.8	A
My firm can easily replace its current suppliers	97.3	A	9.9	A	36.4	A	35.2	A	16.9	A	1.7	A
It is difficult to hire qualified staff and workers	98.3	A	4.1	A	10.4	A	24.4	A	35.0	A	26.1	A
It is difficult to retain qualified staff and workers	98.3	A	5.6	A	26.8	A	34.5	A	27.6	A	5.5	A
My products (goods or services) quickly become obsolete	94.7	A	32.4	A	45.1	A	15.1	A	5.2	A	2.2	A
Production technologies change rapidly	96.1	A	3.3	A	24.2	A	28.1	A	32.9	A	11.4	A
Office technologies change rapidly	96.8	A	1.1	A	10.2	A	26.3	A	44.6	A	17.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Aerospace Product and Parts Manufacturing												
My client's demands are easy to predict	100.0	A	20.3	B	25.9	B	15.9	A	30.4	B	7.5	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.0	A	18.3	B	34.2	B	6.4	A	17.1	B	23.9	B
My competitors' actions are easy to predict	97.3	A	11.3	A	40.3	B	37.1	B	8.6	A	2.8	A
The arrival of new competitors is a constant threat	100.0	A	12.2	A	17.6	B	32.0	B	26.3	B	11.9	A
The arrival of competing products (goods or services) is a constant threat	86.1	A	10.3	A	18.5	B	25.4	B	32.0	B	13.8	A
My firm can easily replace its current suppliers	97.3	A	20.4	B	31.1	B	33.9	B	9.7	A	4.8	A
It is difficult to hire qualified staff and workers	98.4	A	4.4	A	7.8	A	22.2	B	36.5	B	29.0	B
It is difficult to retain qualified staff and workers	100.0	A	2.8	A	12.4	A	35.3	B	32.0	B	17.5	B
My products (goods or services) quickly become obsolete	84.4	A	45.7	B	30.6	B	9.1	A	5.3	A	9.4	A
Production technologies change rapidly	100.0	A	0.0	A	28.4	B	25.1	B	22.5	B	24.0	B
Office technologies change rapidly	100.0	A	0.0	A	10.1	A	18.1	B	38.3	B	33.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment												
My client's demands are easy to predict	96.3	A	18.1	B	21.6	B	31.0	B	27.7	B	1.6	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.4	A	4.4	A	20.5	B	11.9	B	47.3	B	16.0	B
My competitors' actions are easy to predict	97.9	A	11.9	A	33.2	B	34.3	B	19.3	B	1.3	A
The arrival of new competitors is a constant threat	97.9	A	18.8	B	19.5	B	30.3	B	17.8	B	13.6	B
The arrival of competing products (goods or services) is a constant threat	97.9	A	8.2	B	32.3	B	22.6	B	24.2	B	12.7	B
My firm can easily replace its current suppliers	100.0	A	15.1	B	29.0	B	28.6	B	27.3	B	0.0	A
It is difficult to hire qualified staff and workers	100.0	A	9.4	A	9.3	A	23.4	B	35.6	B	22.3	B
It is difficult to retain qualified staff and workers	100.0	A	8.0	B	19.1	B	36.7	B	25.8	B	10.4	A
My products (goods or services) quickly become obsolete	94.4	A	34.4	B	38.1	B	17.4	B	6.4	A	3.7	A
Production technologies change rapidly	97.1	A	4.2	A	24.6	B	35.5	B	19.5	B	16.2	B
Office technologies change rapidly	98.7	A	3.8	A	14.0	B	17.3	B	36.9	B	28.0	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.3
Competitive Environment
Industry by Competitive Factor
Canada, All Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing												
My client's demands are easy to predict	97.7	A	9.5	A	22.4	A	36.8	A	22.5	A	8.8	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.5	A	6.0	A	14.5	A	23.5	A	27.9	A	28.2	A
My competitors' actions are easy to predict	93.9	A	8.6	A	25.8	A	39.2	A	23.7	A	2.6	A
The arrival of new competitors is a constant threat	98.9	A	9.2	A	18.4	A	25.2	A	23.9	A	23.3	A
The arrival of competing products (goods or services) is a constant threat	95.5	A	9.8	A	14.0	A	24.6	A	29.9	A	21.6	A
My firm can easily replace its current suppliers	99.8	A	11.7	A	32.6	A	34.6	A	17.5	A	3.6	A
It is difficult to hire qualified staff and workers	99.5	A	3.2	A	6.2	A	19.0	A	36.1	A	35.5	A
It is difficult to retain qualified staff and workers	99.5	A	4.5	A	23.0	A	27.7	A	26.4	A	18.5	A
My products (goods or services) quickly become obsolete	95.5	A	37.9	A	31.3	A	19.5	A	8.8	A	2.6	A
Production technologies change rapidly	97.5	A	4.4	A	19.6	A	34.1	A	25.4	A	16.4	A
Office technologies change rapidly	97.0	A	4.7	A	12.2	A	23.7	A	36.4	A	23.0	A
Miscellaneous Manufacturing												
My client's demands are easy to predict	97.1	A	6.4	A	33.6	B	26.7	A	28.2	A	5.2	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.4	A	6.2	A	14.9	A	21.3	A	29.1	A	28.6	B
My competitors' actions are easy to predict	95.5	A	4.6	A	35.8	B	41.8	B	15.8	A	2.0	A
The arrival of new competitors is a constant threat	95.8	A	5.7	A	23.5	A	18.0	A	24.0	A	28.8	A
The arrival of competing products (goods or services) is a constant threat	93.9	A	3.2	A	16.0	A	20.1	A	29.8	B	31.0	B
My firm can easily replace its current suppliers	97.4	A	14.7	A	34.3	B	30.8	A	11.8	A	8.4	A
It is difficult to hire qualified staff and workers	99.1	A	3.6	A	7.0	A	21.0	A	33.9	A	34.5	B
It is difficult to retain qualified staff and workers	99.6	A	7.6	A	23.6	A	35.1	B	20.5	A	13.2	A
My products (goods or services) quickly become obsolete	92.1	A	37.5	B	35.6	B	17.5	A	7.3	A	2.2	A
Production technologies change rapidly	96.9	A	8.5	A	23.3	A	38.2	B	20.0	A	9.9	A
Office technologies change rapidly	96.1	A	1.5	A	10.9	A	29.9	B	33.0	B	24.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries												
My client's demands are easy to predict	98.4	A	7.0	A	25.0	A	36.8	A	24.6	A	6.6	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.9	A	5.7	A	14.7	A	20.7	A	28.3	A	30.6	A
My competitors' actions are easy to predict	98.0	A	6.8	A	28.8	A	41.3	A	19.2	A	3.8	A
The arrival of new competitors is a constant threat	98.3	A	6.8	A	20.5	A	22.5	A	25.4	A	24.8	A
The arrival of competing products (goods or services) is a constant threat	96.8	A	4.8	A	15.2	A	22.9	A	30.8	A	26.3	A
My firm can easily replace its current suppliers	99.0	A	13.7	A	31.4	A	30.8	A	17.8	A	6.2	A
It is difficult to hire qualified staff and workers	99.1	A	3.6	A	10.8	A	21.6	A	33.6	A	30.4	A
It is difficult to retain qualified staff and workers	99.3	A	7.4	A	25.3	A	32.3	A	24.8	A	10.2	A
My products (goods or services) quickly become obsolete	94.9	A	35.3	A	34.7	A	17.5	A	7.7	A	4.8	A
Production technologies change rapidly	98.7	A	5.2	A	20.3	A	30.7	A	27.6	A	16.1	A
Office technologies change rapidly	98.0	A	1.8	A	7.6	A	24.3	A	38.4	A	27.9	A
Food Manufacturing												
My client's demands are easy to predict	98.0	A	4.5	A	27.9	A	37.3	A	24.0	A	6.4	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.8	A	4.8	A	10.1	A	22.6	A	33.7	A	28.9	A
My competitors' actions are easy to predict	97.6	A	4.3	A	27.4	A	45.4	A	19.5	A	3.3	A
The arrival of new competitors is a constant threat	97.6	A	6.2	A	15.9	A	20.8	A	30.9	A	26.2	A
The arrival of competing products (goods or services) is a constant threat	95.9	A	2.9	A	11.9	A	19.8	A	35.9	A	29.5	A
My firm can easily replace its current suppliers	98.4	A	17.8	A	26.9	A	28.5	A	20.1	A	6.7	A
It is difficult to hire qualified staff and workers	98.5	A	2.5	A	16.6	A	25.2	A	32.2	A	23.5	A
It is difficult to retain qualified staff and workers	98.6	A	5.2	A	23.5	A	33.5	A	26.6	A	11.2	A
My products (goods or services) quickly become obsolete	95.8	A	32.7	A	31.8	A	18.3	A	9.0	A	8.2	A
Production technologies change rapidly	99.5	A	5.1	A	22.5	A	29.5	A	29.0	A	13.9	A
Office technologies change rapidly	97.3	A	1.0	A	6.9	A	24.3	A	39.8	A	28.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Beverage and Tobacco Product Manufacturing												
My client's demands are easy to predict	98.6	A	10.6	A	13.2	A	36.8	A	34.2	A	5.2	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	0.0	A	2.8	A	17.0	A	19.1	A	61.1	A
My competitors' actions are easy to predict	97.2	A	9.1	A	25.9	A	49.0	A	14.6	A	1.5	A
The arrival of new competitors is a constant threat	100.0	A	12.9	A	31.2	A	11.6	A	22.0	A	22.3	A
The arrival of competing products (goods or services) is a constant threat	100.0	A	5.6	A	7.4	A	21.6	A	39.6	A	25.8	A
My firm can easily replace its current suppliers	100.0	A	14.7	A	42.3	A	21.4	A	17.9	A	3.8	A
It is difficult to hire qualified staff and workers	98.6	A	5.7	A	24.5	A	26.6	A	28.0	A	15.2	A
It is difficult to retain qualified staff and workers	98.6	A	9.6	A	32.4	A	33.0	A	23.7	A	1.4	A
My products (goods or services) quickly become obsolete	97.1	A	38.1	A	34.3	A	16.3	A	1.5	A	9.8	A
Production technologies change rapidly	100.0	A	5.3	A	25.2	A	24.6	A	30.3	A	14.6	A
Office technologies change rapidly	100.0	A	3.0	A	7.2	A	13.3	A	55.8	A	20.7	A
Textile Mills												
My client's demands are easy to predict	97.0	A	10.8	A	31.4	A	42.4	A	11.6	A	3.9	A
My clients can easily substitute my products (goods or services) for the products of my competitors	97.0	A	3.0	A	16.2	A	17.4	A	33.6	A	29.8	A
My competitors' actions are easy to predict	97.0	A	9.0	A	36.4	A	39.6	A	11.7	A	3.3	A
The arrival of new competitors is a constant threat	96.2	A	7.7	A	16.5	A	21.2	A	19.3	A	35.3	A
The arrival of competing products (goods or services) is a constant threat	97.0	A	2.3	A	11.0	A	22.0	A	23.0	A	41.7	A
My firm can easily replace its current suppliers	97.7	A	12.0	A	36.8	A	30.5	A	17.6	A	3.0	A
It is difficult to hire qualified staff and workers	97.7	A	3.0	A	6.7	A	19.7	A	33.9	A	36.8	A
It is difficult to retain qualified staff and workers	97.7	A	3.0	A	28.2	A	25.8	A	33.0	A	10.1	A
My products (goods or services) quickly become obsolete	91.2	A	20.6	A	38.9	A	22.0	A	10.3	A	8.2	A
Production technologies change rapidly	98.4	A	5.4	A	23.4	A	28.6	A	26.1	A	16.5	A
Office technologies change rapidly	95.4	A	0.8	A	4.6	A	26.6	A	28.5	A	39.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Textile Product Mills												
My client's demands are easy to predict	100.0	A	6.6	A	23.4	B	38.9	B	24.3	B	6.8	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	7.8	A	18.6	A	12.7	B	34.0	B	26.9	B
My competitors' actions are easy to predict	99.1	A	4.9	A	37.5	B	39.7	B	11.0	A	6.9	A
The arrival of new competitors is a constant threat	100.0	A	3.7	A	19.8	B	25.5	B	17.1	B	33.9	B
The arrival of competing products (goods or services) is a constant threat	96.0	A	1.9	A	8.3	A	19.9	B	36.5	B	33.3	B
My firm can easily replace its current suppliers	100.0	A	15.2	B	43.6	B	20.5	B	15.7	A	4.9	A
It is difficult to hire qualified staff and workers	100.0	A	0.0	A	8.0	A	24.5	B	39.9	B	27.6	B
It is difficult to retain qualified staff and workers	100.0	A	3.8	A	31.8	B	31.2	B	22.5	B	10.8	A
My products (goods or services) quickly become obsolete	98.2	A	19.1	B	55.0	B	10.6	A	13.4	A	1.9	A
Production technologies change rapidly	98.2	A	4.5	A	26.5	B	34.3	B	24.9	B	9.8	A
Office technologies change rapidly	98.2	A	4.1	A	5.7	A	24.3	B	26.5	B	39.5	B
Clothing Manufacturing												
My client's demands are easy to predict	97.2	A	12.6	A	23.5	A	39.0	A	18.6	A	6.4	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.9	A	7.7	A	7.8	A	34.0	A	26.1	A	24.4	A
My competitors' actions are easy to predict	97.1	A	9.1	A	32.3	A	39.7	A	17.1	A	1.9	A
The arrival of new competitors is a constant threat	95.1	A	6.6	A	15.8	A	21.8	A	32.5	A	23.3	A
The arrival of competing products (goods or services) is a constant threat	97.2	A	4.3	A	11.5	A	16.6	A	43.5	A	24.1	A
My firm can easily replace its current suppliers	98.6	A	10.9	A	28.6	A	38.2	A	17.7	A	4.6	A
It is difficult to hire qualified staff and workers	97.8	A	3.4	A	9.6	A	19.7	A	31.7	A	35.6	A
It is difficult to retain qualified staff and workers	97.8	A	8.2	A	17.0	A	38.9	A	22.8	A	13.2	A
My products (goods or services) quickly become obsolete	93.9	A	23.0	A	24.7	A	24.7	A	15.5	A	12.1	A
Production technologies change rapidly	95.8	A	7.5	A	18.5	A	33.5	A	25.7	A	14.8	A
Office technologies change rapidly	96.3	A	4.0	A	4.9	A	24.3	A	35.4	A	31.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Leather and Allied Product Manufacturing												
My client's demands are easy to predict	100.0	A	16.5	B	22.2	B	40.2	B	5.4	A	15.6	B
My clients can easily substitute my products (goods or services) for the products of my competitors	98.2	A	14.1	B	8.6	A	19.3	B	36.4	B	21.7	B
My competitors' actions are easy to predict	98.2	A	13.5	B	38.5	B	35.2	B	12.8	B	0.0	A
The arrival of new competitors is a constant threat	98.2	A	5.5	A	16.2	B	12.8	B	28.7	B	36.7	B
The arrival of competing products (goods or services) is a constant threat	98.2	A	0.0	A	10.7	B	12.5	A	22.3	B	54.4	B
My firm can easily replace its current suppliers	92.8	B	5.8	A	40.8	B	35.3	B	9.1	B	9.1	A
It is difficult to hire qualified staff and workers	98.2	A	0.0	A	0.0	A	32.1	B	33.0	B	34.9	B
It is difficult to retain qualified staff and workers	98.2	A	5.2	A	15.9	B	35.8	B	29.4	B	13.8	A
My products (goods or services) quickly become obsolete	96.4	A	32.1	B	26.8	B	18.1	B	10.9	B	12.1	B
Production technologies change rapidly	98.2	A	5.5	A	21.4	B	21.1	B	41.6	B	10.4	A
Office technologies change rapidly	98.2	A	0.0	A	1.8	A	17.1	B	52.6	B	28.4	B
Sawmills and Wood Preservation												
My client's demands are easy to predict	96.2	A	5.1	A	16.3	A	38.9	A	26.4	A	13.3	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.2	A	3.2	A	7.6	A	17.8	A	22.6	A	48.7	A
My competitors' actions are easy to predict	98.3	A	6.4	A	23.6	A	43.8	A	17.7	A	8.5	A
The arrival of new competitors is a constant threat	97.2	A	4.5	A	20.6	A	24.9	A	17.3	A	32.7	A
The arrival of competing products (goods or services) is a constant threat	98.4	A	1.8	A	15.8	A	24.5	A	24.9	A	33.0	A
My firm can easily replace its current suppliers	96.6	A	26.3	A	23.8	A	25.7	A	17.2	A	7.0	A
It is difficult to hire qualified staff and workers	100.0	A	7.1	A	9.2	A	26.4	A	32.4	A	24.9	A
It is difficult to retain qualified staff and workers	100.0	A	8.7	A	20.1	A	27.7	A	27.6	A	15.9	A
My products (goods or services) quickly become obsolete	91.4	A	46.1	A	31.3	A	11.4	A	7.7	A	3.5	A
Production technologies change rapidly	98.9	A	5.2	A	10.4	A	19.8	A	38.9	A	25.8	A
Office technologies change rapidly	97.9	A	1.8	A	6.1	A	18.9	A	37.9	A	35.3	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Veneer, Plywood and Engineered Wood Product Manufacturing												
My client's demands are easy to predict	98.3	A	1.5	A	13.9	A	39.6	B	30.3	B	14.7	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.3	A	1.7	A	9.3	A	21.2	B	24.9	B	42.9	B
My competitors' actions are easy to predict	98.3	A	7.3	A	24.6	B	40.1	B	26.3	B	1.7	A
The arrival of new competitors is a constant threat	100.0	A	1.7	A	24.8	B	29.6	B	17.7	B	26.2	B
The arrival of competing products (goods or services) is a constant threat	95.6	A	3.5	A	20.0	A	19.1	B	31.5	B	26.0	B
My firm can easily replace its current suppliers	100.0	A	20.6	B	35.7	B	26.9	B	7.9	A	8.9	A
It is difficult to hire qualified staff and workers	97.3	A	3.1	A	16.0	A	20.5	B	41.3	B	19.2	B
It is difficult to retain qualified staff and workers	97.3	A	8.1	A	29.8	B	29.5	B	25.1	B	7.4	A
My products (goods or services) quickly become obsolete	91.1	A	47.2	B	33.6	B	6.8	A	9.4	A	3.0	A
Production technologies change rapidly	100.0	A	4.7	A	19.4	B	24.3	B	35.0	B	16.6	A
Office technologies change rapidly	100.0	A	0.0	A	8.0	A	29.5	B	36.1	B	26.4	B
Other Wood Product Manufacturing												
My client's demands are easy to predict	99.5	A	7.8	A	16.0	A	41.1	A	28.5	A	6.6	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.5	A	3.5	A	13.3	A	17.7	A	17.7	A	47.9	B
My competitors' actions are easy to predict	99.4	A	5.5	A	26.7	A	44.3	B	19.5	A	4.0	A
The arrival of new competitors is a constant threat	97.8	A	7.3	A	11.6	A	16.2	A	22.7	A	42.2	A
The arrival of competing products (goods or services) is a constant threat	98.9	A	3.2	A	10.4	A	25.3	A	29.6	A	31.5	A
My firm can easily replace its current suppliers	100.0	A	12.7	A	32.1	A	24.5	A	22.9	A	7.8	A
It is difficult to hire qualified staff and workers	98.9	A	3.9	A	12.9	A	21.4	A	34.7	A	27.1	A
It is difficult to retain qualified staff and workers	98.9	A	6.8	A	26.4	A	33.2	A	25.5	A	8.2	A
My products (goods or services) quickly become obsolete	94.2	A	38.3	A	37.4	A	13.8	A	6.2	A	4.3	A
Production technologies change rapidly	98.5	A	3.2	A	21.8	A	35.3	A	30.2	A	9.6	A
Office technologies change rapidly	98.1	A	0.0	A	8.9	A	16.9	A	38.1	A	36.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.4

Competitive Environment

Industry by Competitive Factor

Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Paper Manufacturing												
My client's demands are easy to predict	99.5	A	2.7	A	19.6	A	35.1	A	36.1	A	6.4	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.5	A	2.2	A	9.3	A	15.1	A	34.0	A	39.4	A
My competitors' actions are easy to predict	99.5	A	5.8	A	20.0	A	42.8	A	27.5	A	3.9	A
The arrival of new competitors is a constant threat	98.6	A	9.6	A	21.8	A	20.8	A	25.0	A	22.7	A
The arrival of competing products (goods or services) is a constant threat	99.5	A	5.7	A	16.8	A	22.7	A	28.8	A	26.0	A
My firm can easily replace its current suppliers	100.0	A	14.0	A	31.7	A	32.0	A	17.1	A	5.2	A
It is difficult to hire qualified staff and workers	98.8	A	6.1	A	19.4	A	20.3	A	35.5	A	18.6	A
It is difficult to retain qualified staff and workers	100.0	A	12.4	A	36.0	A	25.8	A	17.9	A	7.8	A
My products (goods or services) quickly become obsolete	97.3	A	38.6	A	41.8	A	10.0	A	5.0	A	4.6	A
Production technologies change rapidly	100.0	A	6.7	A	17.3	A	40.7	A	24.0	A	11.3	A
Office technologies change rapidly	99.1	A	2.3	A	7.0	A	21.2	A	37.9	A	31.6	A
Printing and Related Support Activities												
My client's demands are easy to predict	99.1	A	5.4	A	27.1	B	36.8	B	24.3	A	6.4	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.3	A	5.7	A	11.7	A	19.0	A	27.1	B	36.6	B
My competitors' actions are easy to predict	98.0	A	6.2	A	21.5	A	36.4	B	26.9	A	9.0	A
The arrival of new competitors is a constant threat	99.5	A	4.5	A	24.8	A	24.9	A	24.6	A	21.2	A
The arrival of competing products (goods or services) is a constant threat	95.4	A	3.6	A	12.5	A	28.5	B	29.6	B	25.8	A
My firm can easily replace its current suppliers	99.5	A	8.5	A	28.5	B	31.8	B	19.1	A	12.1	A
It is difficult to hire qualified staff and workers	98.5	A	4.2	A	8.2	A	16.4	A	34.0	B	37.3	B
It is difficult to retain qualified staff and workers	99.5	A	12.1	A	27.5	A	28.1	A	26.5	A	5.8	A
My products (goods or services) quickly become obsolete	89.1	A	23.4	A	27.4	B	25.1	B	14.9	A	9.2	A
Production technologies change rapidly	99.5	A	2.2	A	8.1	A	22.5	A	26.3	B	41.0	B
Office technologies change rapidly	99.5	A	1.2	A	5.4	A	30.0	B	34.9	B	28.5	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing												
My client's demands are easy to predict	97.6	A	7.5	A	10.0	A	40.0	A	32.5	A	10.0	A
My clients can easily substitute my products (goods or services) for the products of my competitors	92.7	A	2.6	A	2.6	A	15.8	A	26.3	A	52.6	A
My competitors' actions are easy to predict	100.0	A	4.9	A	24.4	A	46.3	A	22.0	A	2.4	A
The arrival of new competitors is a constant threat	95.1	A	15.4	A	28.2	A	15.4	A	23.1	A	17.9	A
The arrival of competing products (goods or services) is a constant threat	97.6	A	2.5	A	20.0	A	25.0	A	40.0	A	12.5	A
My firm can easily replace its current suppliers	97.6	A	10.0	A	30.0	A	22.5	A	30.0	A	7.5	A
It is difficult to hire qualified staff and workers	100.0	A	0.0	A	4.9	A	46.3	A	39.0	A	9.8	A
It is difficult to retain qualified staff and workers	100.0	A	2.4	A	41.5	A	41.5	A	14.6	A	0.0	A
My products (goods or services) quickly become obsolete	92.7	A	47.4	A	28.9	A	7.9	A	10.5	A	5.3	A
Production technologies change rapidly	95.1	A	5.1	A	38.5	A	35.9	A	17.9	A	2.6	A
Office technologies change rapidly	100.0	A	2.4	A	7.3	A	26.8	A	34.1	A	29.3	A
Chemical Manufacturing (excluding 3254)												
My client's demands are easy to predict	98.2	A	5.9	A	23.4	A	32.8	A	30.8	A	7.1	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.1	A	3.0	A	18.5	A	19.4	A	31.9	A	27.2	A
My competitors' actions are easy to predict	98.9	A	5.0	A	30.2	A	43.0	A	20.4	A	1.4	A
The arrival of new competitors is a constant threat	98.6	A	6.6	A	23.7	A	22.0	A	28.3	A	19.4	A
The arrival of competing products (goods or services) is a constant threat	98.2	A	5.6	A	17.9	A	23.8	A	32.8	A	19.9	A
My firm can easily replace its current suppliers	99.7	A	11.6	A	32.1	A	36.2	A	14.4	A	5.7	A
It is difficult to hire qualified staff and workers	99.4	A	3.8	A	20.4	A	27.5	A	32.3	A	16.0	A
It is difficult to retain qualified staff and workers	99.1	A	10.5	A	33.5	A	27.3	A	25.1	A	3.7	A
My products (goods or services) quickly become obsolete	98.8	A	33.3	A	39.2	A	17.9	A	8.1	A	1.5	A
Production technologies change rapidly	100.0	A	9.6	A	26.2	A	29.1	A	26.4	A	8.7	A
Office technologies change rapidly	99.7	A	2.1	A	9.3	A	19.3	A	43.8	A	25.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Pharmaceutical and Medicine Manufacturing (3254)												
My client's demands are easy to predict	98.1	A	3.8	A	11.9	A	44.9	B	35.3	B	4.1	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	1.9	A	10.1	A	19.5	A	41.0	B	27.5	A
My competitors' actions are easy to predict	100.0	A	1.9	A	30.5	A	47.9	B	16.7	A	3.1	A
The arrival of new competitors is a constant threat	100.0	A	9.0	A	22.0	A	9.0	A	33.8	B	26.2	A
The arrival of competing products (goods or services) is a constant threat	100.0	A	1.9	A	5.8	A	23.0	A	38.6	B	30.8	A
My firm can easily replace its current suppliers	98.1	A	24.4	A	34.0	B	22.5	B	6.0	A	13.1	A
It is difficult to hire qualified staff and workers	100.0	A	0.0	A	9.0	A	25.6	A	39.7	B	25.7	A
It is difficult to retain qualified staff and workers	100.0	A	5.8	A	28.8	B	32.0	B	23.6	A	9.8	A
My products (goods or services) quickly become obsolete	98.1	A	25.7	A	43.2	B	26.2	B	5.0	A	0.0	A
Production technologies change rapidly	100.0	A	6.5	A	21.9	A	15.4	A	34.2	B	21.9	A
Office technologies change rapidly	100.0	A	1.9	A	5.8	A	21.3	A	45.3	B	25.7	A
Plastics and Rubber Products Manufacturing												
My client's demands are easy to predict	100.0	A	4.4	A	23.1	A	42.7	A	22.9	A	6.8	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.0	A	6.8	A	16.7	A	20.4	A	28.2	A	27.9	A
My competitors' actions are easy to predict	100.0	A	4.7	A	33.1	A	38.7	A	19.8	A	3.7	A
The arrival of new competitors is a constant threat	99.2	A	5.6	A	20.7	A	25.7	A	27.1	A	20.9	A
The arrival of competing products (goods or services) is a constant threat	98.2	A	3.4	A	13.0	A	22.0	A	34.4	A	27.2	A
My firm can easily replace its current suppliers	99.8	A	16.1	A	29.7	A	32.7	A	17.7	A	3.7	A
It is difficult to hire qualified staff and workers	99.3	A	4.7	A	10.9	A	17.8	A	28.4	A	38.3	A
It is difficult to retain qualified staff and workers	99.7	A	8.1	A	24.4	A	29.3	A	26.2	A	12.0	A
My products (goods or services) quickly become obsolete	95.9	A	30.4	A	44.0	A	14.4	A	5.0	A	6.2	A
Production technologies change rapidly	98.4	A	2.0	A	19.1	A	34.6	A	34.7	A	9.6	A
Office technologies change rapidly	98.6	A	1.7	A	8.6	A	22.3	A	44.4	A	23.0	A

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Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Non-Metallic Mineral Products Manufacturing												
My client's demands are easy to predict	98.2	A	3.0	A	20.2	A	42.0	A	27.0	A	7.8	A
My clients can easily substitute my products (goods or services) for the products of my competitors	96.9	A	6.1	A	11.6	A	18.1	A	27.8	A	36.5	A
My competitors' actions are easy to predict	97.0	A	7.1	A	23.4	A	41.6	A	24.7	A	3.2	A
The arrival of new competitors is a constant threat	96.1	A	5.6	A	20.6	A	24.1	A	17.7	A	32.0	A
The arrival of competing products (goods or services) is a constant threat	97.6	A	3.1	A	16.4	A	22.5	A	25.2	A	32.9	A
My firm can easily replace its current suppliers	98.3	A	13.6	A	31.1	A	26.5	A	16.1	A	12.8	A
It is difficult to hire qualified staff and workers	99.4	A	3.5	A	13.7	A	26.4	A	33.2	A	23.2	A
It is difficult to retain qualified staff and workers	99.4	A	13.3	A	27.1	A	27.1	A	17.9	A	14.5	A
My products (goods or services) quickly become obsolete	95.7	A	52.8	A	32.9	A	7.1	A	4.9	A	2.3	A
Production technologies change rapidly	99.4	A	6.9	A	29.6	A	27.2	A	21.8	A	14.5	A
Office technologies change rapidly	96.7	A	1.3	A	5.1	A	24.3	A	37.4	A	32.0	A
Primary Metal Manufacturing												
My client's demands are easy to predict	100.0	A	3.8	A	24.8	A	39.4	A	27.1	A	4.9	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	3.6	A	13.5	A	24.3	A	27.6	A	31.1	A
My competitors' actions are easy to predict	100.0	A	6.6	A	31.4	A	46.0	A	13.9	A	2.2	A
The arrival of new competitors is a constant threat	99.4	A	5.9	A	25.7	A	22.9	A	30.6	A	15.0	A
The arrival of competing products (goods or services) is a constant threat	93.4	A	6.8	A	14.6	A	20.5	A	41.9	A	16.3	A
My firm can easily replace its current suppliers	100.0	A	15.6	A	37.5	A	25.4	A	16.1	A	5.4	A
It is difficult to hire qualified staff and workers	100.0	A	1.5	A	16.8	A	27.6	A	23.7	A	30.3	A
It is difficult to retain qualified staff and workers	100.0	A	7.9	A	29.3	A	28.8	A	25.6	A	8.5	A
My products (goods or services) quickly become obsolete	91.4	A	41.1	A	42.6	A	10.8	A	2.1	A	3.4	A
Production technologies change rapidly	100.0	A	7.7	A	26.7	A	36.6	A	17.5	A	11.5	A
Office technologies change rapidly	98.6	A	2.5	A	10.4	A	17.5	A	38.1	A	31.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing												
My client's demands are easy to predict	99.0	A	9.0	A	25.1	A	33.9	A	24.8	A	7.2	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.4	A	6.6	A	14.8	A	24.5	A	23.2	A	30.9	A
My competitors' actions are easy to predict	97.8	A	7.1	A	27.5	A	39.8	A	19.6	A	6.0	A
The arrival of new competitors is a constant threat	99.3	A	6.6	A	19.7	A	20.9	A	26.1	A	26.7	A
The arrival of competing products (goods or services) is a constant threat	96.4	A	6.6	A	18.5	A	25.3	A	24.7	A	24.8	A
My firm can easily replace its current suppliers	98.7	A	16.6	A	30.7	A	29.0	A	18.6	A	5.1	A
It is difficult to hire qualified staff and workers	99.1	A	1.9	A	5.6	A	24.2	A	31.2	A	37.1	A
It is difficult to retain qualified staff and workers	99.6	A	5.5	A	27.6	A	38.2	A	19.1	A	9.6	A
My products (goods or services) quickly become obsolete	94.4	A	51.4	A	28.5	A	15.4	A	2.6	A	2.1	A
Production technologies change rapidly	99.3	A	6.0	A	22.7	A	30.3	A	28.0	A	12.9	A
Office technologies change rapidly	98.7	A	3.0	A	7.8	A	25.4	A	36.8	A	27.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)												
My client's demands are easy to predict	100.0	A	9.8	A	33.8	A	33.5	A	19.1	A	3.8	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.4	A	2.2	A	17.3	A	19.8	A	30.0	A	30.6	A
My competitors' actions are easy to predict	98.3	A	5.9	A	27.8	A	41.0	A	21.6	A	3.7	A
The arrival of new competitors is a constant threat	98.8	A	7.2	A	20.2	A	21.4	A	22.4	A	28.8	A
The arrival of competing products (goods or services) is a constant threat	98.3	A	5.0	A	11.9	A	25.4	A	32.5	A	25.2	A
My firm can easily replace its current suppliers	100.0	A	12.6	A	30.7	A	34.8	A	17.7	A	4.1	A
It is difficult to hire qualified staff and workers	99.5	A	3.6	A	10.1	A	20.1	A	36.3	A	30.0	A
It is difficult to retain qualified staff and workers	98.9	A	3.6	A	23.7	A	38.1	A	22.8	A	11.8	A
My products (goods or services) quickly become obsolete	98.4	A	36.0	A	38.1	A	20.4	A	2.3	A	3.1	A
Production technologies change rapidly	99.5	A	6.2	A	15.3	A	41.3	A	25.1	A	12.1	A
Office technologies change rapidly	99.0	A	0.7	A	2.6	A	29.3	A	40.9	A	26.5	A

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Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)												
My client's demands are easy to predict	97.2	A	8.4	A	28.4	A	37.9	B	20.1	A	5.2	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.0	A	4.1	A	18.2	A	20.9	A	30.9	A	25.9	A
My competitors' actions are easy to predict	98.6	A	9.3	A	29.7	A	42.0	B	15.6	A	3.5	A
The arrival of new competitors is a constant threat	98.5	A	8.0	A	19.4	A	30.5	A	20.7	A	21.4	A
The arrival of competing products (goods or services) is a constant threat	97.6	A	6.5	A	20.4	A	25.9	A	24.4	A	22.8	A
My firm can easily replace its current suppliers	98.8	A	7.0	A	25.8	A	33.9	A	25.1	A	8.2	A
It is difficult to hire qualified staff and workers	100.0	A	3.5	A	8.4	A	14.2	A	34.4	A	39.5	B
It is difficult to retain qualified staff and workers	99.5	A	7.9	A	20.3	A	34.8	A	29.1	A	7.9	A
My products (goods or services) quickly become obsolete	94.1	A	34.7	A	36.3	B	18.9	A	5.5	A	4.5	A
Production technologies change rapidly	98.1	A	5.5	A	19.9	A	27.9	A	26.1	A	20.6	A
Office technologies change rapidly	95.7	A	1.8	A	5.5	A	26.4	A	35.1	B	31.3	A
Computer and Peripheral Equipment Manufacturing												
My client's demands are easy to predict	95.3	A	7.3	A	48.0	B	24.2	B	20.5	B	0.0	A
My clients can easily substitute my products (goods or services) for the products of my competitors	95.3	A	6.1	B	27.0	B	15.2	A	34.1	B	17.5	A
My competitors' actions are easy to predict	97.7	A	18.5	B	23.8	B	37.3	B	15.1	B	5.4	A
The arrival of new competitors is a constant threat	97.7	A	9.9	A	17.7	B	19.0	B	27.6	B	25.8	B
The arrival of competing products (goods or services) is a constant threat	97.7	A	4.8	A	8.1	B	10.7	A	40.5	B	35.9	B
My firm can easily replace its current suppliers	97.7	A	20.2	A	43.5	B	7.1	A	18.1	B	11.1	B
It is difficult to hire qualified staff and workers	97.7	A	5.6	B	4.8	A	34.3	B	15.1	B	40.3	B
It is difficult to retain qualified staff and workers	97.7	A	4.8	A	8.3	B	38.9	B	40.9	B	7.1	A
My products (goods or services) quickly become obsolete	100.0	A	7.9	B	25.4	B	22.5	B	27.1	B	17.1	B
Production technologies change rapidly	100.0	A	2.9	A	5.0	A	41.9	B	28.9	B	21.3	A
Office technologies change rapidly	100.0	A	0.0	A	7.6	A	31.8	B	32.6	B	28.1	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Communications Equipment Manufacturing												
My client's demands are easy to predict	97.9	A	1.7	A	34.6	B	35.8	B	24.6	A	3.4	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	2.1	A	29.1	B	18.6	A	28.3	B	21.9	B
My competitors' actions are easy to predict	100.0	A	1.7	A	51.3	B	33.7	B	9.1	A	4.3	A
The arrival of new competitors is a constant threat	100.0	A	2.1	A	28.1	B	21.7	A	30.4	B	17.7	B
The arrival of competing products (goods or services) is a constant threat	96.6	A	0.0	A	18.9	A	10.2	A	33.1	B	37.8	B
My firm can easily replace its current suppliers	100.0	A	4.3	A	31.8	B	42.4	B	13.6	A	7.9	A
It is difficult to hire qualified staff and workers	100.0	A	5.9	A	5.9	A	19.3	A	35.7	B	33.2	B
It is difficult to retain qualified staff and workers	100.0	A	5.8	A	18.6	A	38.2	B	21.8	B	15.6	A
My products (goods or services) quickly become obsolete	96.7	A	14.5	B	37.8	B	34.7	B	13.0	A	0.0	A
Production technologies change rapidly	100.0	A	5.5	A	12.8	A	29.6	B	23.2	A	28.9	B
Office technologies change rapidly	98.2	A	0.0	A	16.8	A	15.6	A	51.2	B	16.4	A
Audio and Video Equipment Manufacturing												
My client's demands are easy to predict	x	A	x	A	x	A	x	A	x	A	x	A
My clients can easily substitute my products (goods or services) for the products of my competitors	x	A	x	A	x	A	x	A	x	A	x	A
My competitors' actions are easy to predict	x	A	x	A	x	A	x	A	x	A	x	A
The arrival of new competitors is a constant threat	x	A	x	A	x	A	x	A	x	A	x	A
The arrival of competing products (goods or services) is a constant threat	x	A	x	A	x	A	x	A	x	A	x	A
My firm can easily replace its current suppliers	x	A	x	A	x	A	x	A	x	A	x	A
It is difficult to hire qualified staff and workers	x	A	x	A	x	A	x	A	x	A	x	A
It is difficult to retain qualified staff and workers	x	A	x	A	x	A	x	A	x	A	x	A
My products (goods or services) quickly become obsolete	x	A	x	A	x	A	x	A	x	A	x	A
Production technologies change rapidly	x	A	x	A	x	A	x	A	x	A	x	A
Office technologies change rapidly	x	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing												
My client's demands are easy to predict	100.0	A	9.0	A	48.8	B	20.6	B	19.4	B	2.3	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	4.3	A	39.4	B	20.2	A	6.6	A	29.6	B
My competitors' actions are easy to predict	100.0	A	9.9	A	43.0	B	30.8	B	16.3	B	0.0	A
The arrival of new competitors is a constant threat	100.0	A	4.4	A	16.7	A	28.4	B	24.3	A	26.2	B
The arrival of competing products (goods or services) is a constant threat	97.8	A	2.2	A	19.1	A	13.5	B	40.7	B	24.6	B
My firm can easily replace its current suppliers	100.0	A	13.4	A	26.5	B	25.1	A	20.8	B	14.1	B
It is difficult to hire qualified staff and workers	100.0	A	2.3	A	0.0	A	15.5	A	46.8	B	35.5	B
It is difficult to retain qualified staff and workers	100.0	A	4.6	A	8.7	A	49.2	B	21.9	B	15.6	A
My products (goods or services) quickly become obsolete	97.8	A	11.3	A	31.0	B	27.2	B	26.0	B	4.5	A
Production technologies change rapidly	94.6	A	4.7	A	11.6	A	32.0	B	33.1	B	18.6	B
Office technologies change rapidly	100.0	A	0.0	A	6.7	A	43.8	B	35.3	B	14.1	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media												
My client's demands are easy to predict	100.0	A	15.2	B	25.5	A	29.7	A	26.8	B	2.8	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	14.5	A	25.9	A	14.0	A	25.7	B	19.9	B
My competitors' actions are easy to predict	98.0	A	5.7	A	29.9	B	44.1	B	19.3	A	0.9	A
The arrival of new competitors is a constant threat	98.9	A	8.5	A	20.8	A	31.3	B	16.0	A	23.3	B
The arrival of competing products (goods or services) is a constant threat	94.1	A	4.6	A	15.1	A	24.9	A	25.8	A	29.5	B
My firm can easily replace its current suppliers	99.1	A	15.2	A	30.8	B	28.8	B	20.2	B	5.0	A
It is difficult to hire qualified staff and workers	100.0	A	2.7	A	15.7	A	22.2	A	38.9	B	20.4	B
It is difficult to retain qualified staff and workers	100.0	A	4.4	A	18.9	A	28.3	B	38.7	B	9.7	A
My products (goods or services) quickly become obsolete	97.1	A	19.3	A	40.0	B	26.9	B	10.7	A	3.0	A
Production technologies change rapidly	97.1	A	1.9	A	17.6	A	28.8	B	33.9	B	17.8	A
Office technologies change rapidly	93.1	A	4.2	A	7.7	A	25.4	B	42.9	B	19.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Electrical Equipment, Appliance and Component Manufacturing												
My client's demands are easy to predict	99.2	A	7.6	A	26.9	A	40.6	A	22.6	A	2.1	A
My clients can easily substitute my products (goods or services) for the products of my competitors	99.2	A	5.0	A	10.6	A	22.5	A	34.8	A	27.1	A
My competitors' actions are easy to predict	100.0	A	12.6	A	26.7	A	39.9	A	18.3	A	2.5	A
The arrival of new competitors is a constant threat	100.0	A	9.1	A	22.7	A	22.4	A	24.5	A	21.3	A
The arrival of competing products (goods or services) is a constant threat	99.2	A	5.6	A	14.2	A	24.4	A	30.2	A	25.5	A
My firm can easily replace its current suppliers	98.7	A	11.8	A	42.7	A	28.5	A	16.5	A	0.6	A
It is difficult to hire qualified staff and workers	99.2	A	5.6	A	13.2	A	23.1	A	32.0	A	26.2	A
It is difficult to retain qualified staff and workers	99.2	A	5.8	A	32.7	A	31.3	A	21.9	A	8.4	A
My products (goods or services) quickly become obsolete	98.6	A	26.4	A	36.3	A	26.3	A	8.1	A	2.9	A
Production technologies change rapidly	98.3	A	5.8	A	21.9	A	40.4	A	22.0	A	10.0	A
Office technologies change rapidly	97.9	A	0.0	A	9.7	A	24.7	A	37.5	A	28.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing												
My client's demands are easy to predict	99.3	A	3.8	A	18.9	A	42.1	B	26.3	A	8.9	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.5	A	11.6	A	21.3	A	14.1	A	28.4	A	24.6	A
My competitors' actions are easy to predict	98.4	A	6.1	A	27.0	A	45.5	B	19.4	A	1.9	A
The arrival of new competitors is a constant threat	100.0	A	7.0	A	29.2	A	17.7	A	27.7	A	18.4	A
The arrival of competing products (goods or services) is a constant threat	93.3	A	4.6	A	20.0	A	20.9	A	34.2	B	20.3	A
My firm can easily replace its current suppliers	98.8	A	9.8	A	36.3	B	34.5	A	17.3	A	2.1	A
It is difficult to hire qualified staff and workers	100.0	A	5.2	A	10.3	A	20.3	A	38.1	B	26.0	A
It is difficult to retain qualified staff and workers	100.0	A	7.0	A	26.8	A	32.1	B	27.9	A	6.2	A
My products (goods or services) quickly become obsolete	98.1	A	35.3	A	43.0	B	14.1	A	6.4	A	1.2	A
Production technologies change rapidly	98.1	A	4.2	A	21.9	A	26.9	A	33.6	B	13.5	A
Office technologies change rapidly	98.9	A	1.4	A	11.5	A	27.0	A	40.6	B	19.5	A

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Table 1.4
Competitive Environment
Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Aerospace Product and Parts Manufacturing												
My client's demands are easy to predict	100.0	A	16.7	B	30.9	B	17.3	B	26.1	B	8.9	A
My clients can easily substitute my products (goods or services) for the products of my competitors	100.0	A	21.4	B	36.6	B	5.6	A	20.0	B	16.5	A
My competitors' actions are easy to predict	96.8	A	9.2	A	39.3	B	44.4	B	3.7	A	3.3	A
The arrival of new competitors is a constant threat	100.0	A	10.4	A	21.0	B	29.6	B	28.1	B	10.8	A
The arrival of competing products (goods or services) is a constant threat	95.1	A	11.4	A	18.7	B	26.3	B	31.9	B	11.7	A
My firm can easily replace its current suppliers	96.8	A	17.7	B	24.2	B	40.7	B	11.6	B	5.8	A
It is difficult to hire qualified staff and workers	98.1	A	5.3	A	9.4	A	21.6	B	41.7	B	22.1	B
It is difficult to retain qualified staff and workers	100.0	A	1.7	A	14.8	B	33.5	B	32.5	B	17.5	B
My products (goods or services) quickly become obsolete	88.7	A	45.8	B	31.1	B	6.6	A	6.0	A	10.6	B
Production technologies change rapidly	100.0	A	0.0	A	30.6	B	24.6	B	22.0	B	22.8	B
Office technologies change rapidly	100.0	A	0.0	A	12.0	A	16.7	B	40.0	B	31.3	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment												
My client's demands are easy to predict	97.9	A	20.9	B	25.5	B	23.6	B	30.0	B	0.0	A
My clients can easily substitute my products (goods or services) for the products of my competitors	97.9	A	5.9	A	24.6	B	7.7	B	50.0	B	11.8	B
My competitors' actions are easy to predict	100.0	A	15.6	B	36.0	B	26.4	B	20.3	B	1.7	A
The arrival of new competitors is a constant threat	100.0	A	21.7	B	21.7	B	23.0	B	23.3	B	10.3	B
The arrival of competing products (goods or services) is a constant threat	100.0	A	6.1	B	42.3	B	17.6	B	24.8	B	9.2	B
My firm can easily replace its current suppliers	100.0	A	17.4	B	33.1	B	29.2	B	20.3	B	0.0	A
It is difficult to hire qualified staff and workers	100.0	A	12.5	B	10.7	B	14.6	B	36.1	B	26.1	B
It is difficult to retain qualified staff and workers	100.0	A	7.8	B	19.9	B	27.7	B	32.5	B	12.2	A
My products (goods or services) quickly become obsolete	98.3	A	37.8	B	38.9	B	10.3	B	8.3	B	4.7	A
Production technologies change rapidly	96.2	A	3.9	A	24.2	B	32.6	B	23.4	B	15.9	B
Office technologies change rapidly	98.3	A	2.9	A	18.8	B	12.1	B	43.2	B	23.0	B

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Industry by Competitive Factor
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing												
My client's demands are easy to predict	97.2	A	7.8	A	23.0	A	37.7	A	21.7	A	9.9	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.1	A	5.5	A	15.3	A	23.5	A	29.0	A	26.7	A
My competitors' actions are easy to predict	92.6	A	7.9	A	28.7	A	40.2	B	21.2	A	2.0	A
The arrival of new competitors is a constant threat	98.6	A	8.9	A	17.5	A	26.0	A	25.6	A	22.1	A
The arrival of competing products (goods or services) is a constant threat	94.7	A	10.0	A	14.6	A	23.9	A	31.2	A	20.3	A
My firm can easily replace its current suppliers	100.0	A	11.0	A	34.4	A	36.2	A	16.0	A	2.4	A
It is difficult to hire qualified staff and workers	99.3	A	3.9	A	5.9	A	18.3	A	37.7	A	34.2	A
It is difficult to retain qualified staff and workers	99.3	A	5.2	A	23.1	A	25.4	A	29.5	A	16.7	A
My products (goods or services) quickly become obsolete	95.1	A	36.4	A	32.7	A	18.4	A	10.4	A	2.1	A
Production technologies change rapidly	98.5	A	4.3	A	17.6	A	31.1	A	27.8	A	19.2	A
Office technologies change rapidly	97.8	A	1.8	A	12.1	A	23.0	A	40.3	A	22.8	A
Miscellaneous Manufacturing												
My client's demands are easy to predict	96.5	A	4.5	A	33.3	B	28.4	B	29.2	B	4.6	A
My clients can easily substitute my products (goods or services) for the products of my competitors	98.4	A	7.5	A	17.8	A	20.2	B	26.1	A	28.4	B
My competitors' actions are easy to predict	96.5	A	5.1	A	35.2	B	42.6	B	15.0	A	2.1	A
The arrival of new competitors is a constant threat	95.1	A	5.9	A	23.0	B	14.0	A	27.1	B	30.0	B
The arrival of competing products (goods or services) is a constant threat	95.1	A	3.8	A	14.4	A	23.0	A	27.7	B	31.1	B
My firm can easily replace its current suppliers	98.4	A	15.5	A	36.7	B	29.4	B	10.5	A	7.9	A
It is difficult to hire qualified staff and workers	99.0	A	2.8	A	7.8	A	18.5	A	39.2	B	31.7	B
It is difficult to retain qualified staff and workers	99.5	A	8.9	A	22.9	A	35.1	B	20.1	A	13.0	A
My products (goods or services) quickly become obsolete	92.4	A	35.2	B	35.0	B	20.5	B	6.8	A	2.6	A
Production technologies change rapidly	96.2	A	6.6	A	21.5	A	37.4	B	22.4	B	12.2	A
Office technologies change rapidly	97.3	A	0.5	A	9.3	A	29.9	B	34.2	B	26.1	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 2

There are four tables for Question 2. Two tables are for all manufacturing (Tables 2.1 and 2.3) and two are for innovators in manufacturing (Tables 2.2 and 2.4). Two sort orders were adopted for each pair of tables for all manufacturing and innovators in manufacturing respectively. The first tables for each pair, Table 2.1 and Table 2.2, present firm success factor by industry whereas the second tables for each pair, Table 2.3 and Table 2.4 present industry by firm success factor.

The following contains an explanation of how to read these tables using Table 2.1 as an example.

For 'Total Manufacturing Industries' 97.7% of firms indicated their opinion about the importance of "Seeking new markets". Of these:

- 2.3% indicated low importance;
- 5.7% indicated that it was of moderately low importance;
- 17.0% indicated medium importance;
- 34.6% indicated moderately high importance; and
- 40.5% indicated high importance.

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Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Seeking new markets												
Total Manufacturing Industries	97.7	A	2.3	A	5.7	A	17.0	A	34.6	A	40.5	A
Food Manufacturing	96.8	A	2.9	A	4.0	A	14.9	A	33.1	A	45.1	A
Beverage and Tobacco Product Manufacturing	94.1	A	4.5	A	8.2	A	14.7	A	33.2	A	39.5	A
Textile Mills	97.4	A	3.3	A	5.1	A	17.8	A	31.2	A	42.6	A
Textile Product Mills	99.2	A	0.0	A	3.4	B	9.6	A	32.4	B	54.6	B
Clothing Manufacturing	97.2	A	0.4	A	2.4	A	15.6	A	30.3	A	51.3	A
Leather and Allied Product Manufacturing	100.0	A	2.2	A	5.0	A	17.7	B	21.4	B	53.7	B
Sawmills and Wood Preservation	95.0	A	2.2	A	4.0	A	18.1	A	36.2	A	39.6	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.2	A	1.1	A	8.8	A	18.7	A	36.3	A	35.1	A
Other Wood Product Manufacturing	99.2	A	1.2	A	5.7	A	15.0	A	36.6	A	41.5	A
Paper Manufacturing	97.1	A	4.5	A	4.1	A	15.2	A	37.6	A	38.6	A
Printing and Related Support Activities	98.3	A	1.0	A	3.7	A	19.3	A	39.2	A	36.7	A
Petroleum and Coal Products Manufacturing	90.7	A	2.0	A	3.1	A	27.6	A	34.7	A	32.7	A
Chemical Manufacturing (excluding 3254)	99.1	A	1.0	A	6.7	A	18.3	A	34.8	A	39.1	A
Pharmaceutical and Medicine Manufacturing (3254)	98.4	A	1.6	A	0.0	A	8.1	A	35.3	B	55.0	B
Plastics and Rubber Products Manufacturing	98.6	A	1.4	A	4.6	A	14.8	A	37.9	A	41.3	A
Non-Metallic Mineral Products Manufacturing	98.1	A	4.1	A	10.1	A	20.5	A	27.8	A	37.4	A
Primary Metal Manufacturing	98.6	A	4.1	A	5.1	A	19.7	A	38.6	A	32.5	A
Fabricated Metal Product Manufacturing	97.9	A	2.5	A	7.3	A	22.2	A	33.7	A	34.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.4	A	3.1	A	4.8	A	16.2	A	34.3	A	41.6	A
Machinery Manufacturing (excluding 3331 & 3332)	98.4	A	0.4	A	8.0	A	15.7	A	34.1	A	41.8	A
Computer and Peripheral Equipment Manufacturing	95.6	A	0.0	A	17.4	A	16.1	B	21.7	B	44.8	B
Communications Equipment Manufacturing	100.0	A	1.5	A	4.7	A	9.3	A	29.1	B	55.4	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	0.0	A	2.2	A	8.3	A	47.8	B	41.7	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	96.7	A	1.8	A	4.2	A	14.4	A	31.3	A	48.3	B
Electrical Equipment, Appliance and Component Manufacturing	97.6	A	1.9	A	4.9	A	16.4	A	36.8	A	39.9	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	96.5	A	4.2	A	5.3	A	14.8	A	37.5	A	38.3	A
Aerospace Product and Parts Manufacturing	96.5	A	4.5	A	13.8	B	11.7	A	29.1	B	40.9	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	97.9	A	1.8	A	8.9	B	20.6	B	36.8	B	31.9	B
Furniture and Related Products Manufacturing	98.3	A	4.5	A	6.5	A	15.0	A	37.8	A	36.2	A
Miscellaneous Manufacturing	96.5	A	3.5	A	6.4	A	14.3	A	33.2	B	42.6	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Satisfying existing clients												
Total Manufacturing Industries	99.1	A	0.3	A	0.4	A	2.3	A	17.1	A	79.9	A
Food Manufacturing	98.2	A	0.0	A	0.3	A	3.2	A	19.9	A	76.7	A
Beverage and Tobacco Product Manufacturing	98.4	A	0.0	A	0.0	A	0.0	A	25.6	A	74.4	A
Textile Mills	98.0	A	0.7	A	2.0	A	2.0	A	15.7	A	79.5	A
Textile Product Mills	100.0	A	0.0	A	0.0	A	0.8	A	21.3	B	77.9	B
Clothing Manufacturing	99.2	A	0.0	A	0.8	A	4.6	A	15.7	A	78.9	A
Leather and Allied Product Manufacturing	100.0	A	0.0	A	1.3	A	0.0	A	13.4	A	85.3	A
Sawmills and Wood Preservation	97.9	A	0.0	A	0.6	A	4.6	A	25.3	A	69.6	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	1.1	A	1.1	A	1.8	A	15.9	A	80.1	A
Other Wood Product Manufacturing	98.4	A	0.0	A	0.7	A	3.6	A	22.4	A	73.3	A
Paper Manufacturing	99.3	A	0.0	A	0.7	A	1.3	A	13.7	A	84.4	A
Printing and Related Support Activities	99.6	A	0.0	A	0.0	A	0.7	A	16.0	A	83.3	A
Petroleum and Coal Products Manufacturing	100.0	A	1.9	A	0.0	A	0.0	A	25.9	A	72.2	A
Chemical Manufacturing (excluding 3254)	99.3	A	0.4	A	0.6	A	1.7	A	20.2	A	77.1	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	0.0	A	0.0	A	0.0	A	17.3	A	82.7	A
Plastics and Rubber Products Manufacturing	99.7	A	0.6	A	0.4	A	2.9	A	14.4	A	81.7	A
Non-Metallic Mineral Products Manufacturing	99.7	A	0.8	A	0.0	A	3.3	A	15.9	A	80.0	A
Primary Metal Manufacturing	99.5	A	0.0	A	0.0	A	1.0	A	14.3	A	84.7	A
Fabricated Metal Product Manufacturing	99.0	A	0.5	A	0.4	A	2.0	A	13.1	A	84.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.2	A	0.0	A	1.1	A	2.6	A	17.7	A	78.7	A
Machinery Manufacturing (excluding 3331 & 3332)	99.7	A	0.0	A	0.0	A	2.9	A	20.3	A	76.7	A
Computer and Peripheral Equipment Manufacturing	95.6	A	5.6	B	0.0	A	2.3	A	7.0	A	85.1	B
Communications Equipment Manufacturing	100.0	A	0.0	A	0.0	A	0.0	A	23.5	B	76.5	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	0.0	A	0.0	A	0.0	A	19.6	A	80.4	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	0.0	A	0.0	A	2.6	A	15.6	A	81.8	A
Electrical Equipment, Appliance and Component Manufacturing	100.0	A	1.0	A	0.0	A	3.0	A	17.7	A	78.3	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	97.7	A	0.0	A	0.3	A	1.0	A	13.0	A	85.7	A
Aerospace Product and Parts Manufacturing	100.0	A	0.0	A	0.0	A	1.7	A	10.6	A	87.7	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	0.0	A	0.0	A	1.3	A	29.8	B	68.9	B
Furniture and Related Products Manufacturing	98.7	A	0.0	A	0.0	A	2.8	A	17.2	A	80.0	A
Miscellaneous Manufacturing	99.6	A	1.1	A	1.5	A	1.6	A	15.3	A	80.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Developing niche or specialized markets												
Total Manufacturing Industries	95.4	A	1.9	A	6.6	A	20.2	A	35.8	A	35.5	A
Food Manufacturing	95.1	A	1.3	A	10.9	A	23.5	A	33.1	A	31.3	A
Beverage and Tobacco Product Manufacturing	95.3	A	1.1	A	11.9	A	23.3	A	33.6	A	30.0	A
Textile Mills	95.3	A	0.0	A	6.7	A	17.5	A	28.0	A	47.9	A
Textile Product Mills	95.1	A	0.0	A	1.6	A	24.9	B	27.9	B	45.6	B
Clothing Manufacturing	90.3	A	1.4	A	5.2	A	21.3	A	33.2	A	39.0	A
Leather and Allied Product Manufacturing	96.3	A	0.0	A	0.0	A	5.2	A	44.9	B	49.9	B
Sawmills and Wood Preservation	93.4	A	3.1	A	4.3	A	16.9	A	38.8	A	36.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing	89.8	A	1.2	A	7.3	A	19.0	A	36.7	B	35.8	A
Other Wood Product Manufacturing	96.1	A	2.3	A	9.5	A	27.9	A	36.6	A	23.6	A
Paper Manufacturing	98.6	A	2.9	A	8.2	A	14.7	A	32.2	A	42.1	A
Printing and Related Support Activities	97.6	A	1.0	A	3.0	A	16.8	A	38.4	A	40.8	A
Petroleum and Coal Products Manufacturing	92.6	A	2.0	A	12.0	A	19.0	A	43.0	A	24.0	A
Chemical Manufacturing (excluding 3254)	97.8	A	1.8	A	5.2	A	19.1	A	43.2	A	30.8	A
Pharmaceutical and Medicine Manufacturing (3254)	98.4	A	1.6	A	6.6	A	19.4	A	34.9	A	37.6	A
Plastics and Rubber Products Manufacturing	98.1	A	2.5	A	4.5	A	17.8	A	37.2	A	37.9	A
Non-Metallic Mineral Products Manufacturing	92.9	A	4.1	A	6.9	A	23.9	A	32.5	A	32.6	A
Primary Metal Manufacturing	96.4	A	2.6	A	9.0	A	14.1	A	40.5	A	33.7	A
Fabricated Metal Product Manufacturing	93.8	A	2.5	A	8.3	A	23.2	A	29.6	A	36.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	97.8	A	1.0	A	6.1	A	17.2	A	46.9	A	28.8	A
Machinery Manufacturing (excluding 3331 & 3332)	97.4	A	0.6	A	5.2	A	15.1	A	40.3	A	38.8	A
Computer and Peripheral Equipment Manufacturing	95.6	A	0.0	A	0.0	A	7.6	A	34.7	B	57.8	B
Communications Equipment Manufacturing	100.0	A	0.0	A	3.0	A	20.7	A	39.8	B	36.5	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	0.0	A	2.2	A	14.7	A	46.6	B	36.6	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	96.3	A	0.0	A	2.7	A	10.5	A	40.0	A	46.8	B
Electrical Equipment, Appliance and Component Manufacturing	99.5	A	1.9	A	6.9	A	28.5	A	35.1	A	27.6	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	95.2	A	2.7	A	11.0	A	23.9	A	29.9	A	32.5	A
Aerospace Product and Parts Manufacturing	94.7	A	0.0	A	1.5	A	11.4	A	45.9	B	41.2	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	95.7	A	4.1	A	3.2	A	16.9	B	38.0	B	37.8	B
Furniture and Related Products Manufacturing	93.9	A	2.1	A	4.6	A	25.9	A	37.1	A	30.3	A
Miscellaneous Manufacturing	93.3	A	4.2	A	6.6	A	19.2	A	36.5	B	33.6	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Developing export markets												
Total Manufacturing Industries	93.9	A	9.0	A	10.6	A	18.1	A	27.8	A	34.5	A
Food Manufacturing	93.8	A	10.5	A	14.9	A	18.1	A	25.0	A	31.5	A
Beverage and Tobacco Product Manufacturing	92.0	A	15.2	A	21.1	A	20.9	A	14.5	A	28.3	A
Textile Mills	92.3	A	4.1	A	8.8	A	12.1	A	28.9	A	46.2	A
Textile Product Mills	95.9	A	4.8	A	13.4	B	24.5	B	21.3	B	35.9	B
Clothing Manufacturing	91.5	A	4.4	A	7.0	A	15.7	A	24.9	A	47.9	A
Leather and Allied Product Manufacturing	96.5	A	0.0	A	10.1	B	11.4	A	28.7	B	49.8	B
Sawmills and Wood Preservation	91.3	A	2.4	A	10.0	A	17.2	A	27.2	A	43.1	A
Veneer, Plywood and Engineered Wood Product Manufacturing	95.3	A	7.0	A	9.3	A	25.8	A	24.3	A	33.5	A
Other Wood Product Manufacturing	95.5	A	7.5	A	5.7	A	20.7	A	28.3	A	37.9	A
Paper Manufacturing	96.5	A	11.8	A	12.5	A	18.2	A	28.4	A	29.1	A
Printing and Related Support Activities	91.3	A	14.9	A	12.6	A	22.8	A	25.0	A	24.8	A
Petroleum and Coal Products Manufacturing	85.2	A	12.0	A	17.4	A	17.4	A	31.5	A	21.7	A
Chemical Manufacturing (excluding 3254)	94.1	A	13.1	A	12.3	A	24.7	A	24.7	A	25.2	A
Pharmaceutical and Medicine Manufacturing (3254)	93.5	A	10.0	A	18.3	A	14.7	A	21.5	A	35.4	B
Plastics and Rubber Products Manufacturing	97.8	A	8.0	A	8.6	A	17.9	A	34.1	A	31.3	A
Non-Metallic Mineral Products Manufacturing	85.3	A	20.2	A	12.9	A	17.8	A	21.5	A	27.5	A
Primary Metal Manufacturing	97.2	A	12.1	A	8.5	A	18.1	A	31.9	A	29.3	A
Fabricated Metal Product Manufacturing	92.8	A	10.8	A	10.8	A	18.3	A	26.2	A	33.9	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.5	A	1.6	A	6.7	A	15.4	A	34.3	A	42.1	A
Machinery Manufacturing (excluding 3331 & 3332)	96.9	A	4.1	A	8.6	A	18.1	A	33.3	A	35.9	A
Computer and Peripheral Equipment Manufacturing	95.6	A	9.3	A	10.7	B	15.3	B	17.8	B	46.9	B
Communications Equipment Manufacturing	98.5	A	4.0	A	3.1	A	19.3	B	31.2	A	42.4	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	97.8	A	0.0	A	9.5	A	22.4	A	31.7	B	36.4	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	97.4	A	8.5	A	1.8	A	16.3	A	21.0	B	52.4	B
Electrical Equipment, Appliance and Component Manufacturing	97.1	A	7.2	A	7.7	A	17.3	A	32.5	A	35.3	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	93.1	A	6.2	A	14.2	A	16.3	A	37.7	A	25.6	A
Aerospace Product and Parts Manufacturing	89.6	A	4.1	A	7.1	A	15.7	A	34.6	B	38.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	93.6	A	8.8	A	7.1	A	31.0	B	17.9	B	35.2	B
Furniture and Related Products Manufacturing	94.9	A	5.6	A	8.0	A	16.9	A	34.0	A	35.5	A
Miscellaneous Manufacturing	92.5	A	13.5	A	15.8	A	10.2	A	21.9	A	38.6	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Promoting firm or product (good or service) reputation												
Total Manufacturing Industries	98.3	A	0.9	A	3.2	A	12.5	A	31.7	A	51.8	A
Food Manufacturing	98.5	A	0.3	A	2.3	A	11.8	A	34.3	A	51.2	A
Beverage and Tobacco Product Manufacturing	98.4	A	0.0	A	0.0	A	10.0	A	26.0	A	64.0	A
Textile Mills	98.0	A	0.0	A	1.9	A	11.1	A	24.7	A	62.3	A
Textile Product Mills	100.0	A	0.0	A	0.8	A	12.2	A	40.1	B	46.9	B
Clothing Manufacturing	94.8	A	0.9	A	2.6	A	15.2	A	30.4	A	51.0	A
Leather and Allied Product Manufacturing	100.0	A	7.6	A	2.4	A	12.8	A	33.1	B	44.2	B
Sawmills and Wood Preservation	94.6	A	0.4	A	3.1	A	15.6	A	34.5	A	46.4	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.9	A	4.0	A	3.7	A	6.7	A	25.7	A	60.0	B
Other Wood Product Manufacturing	96.1	A	0.0	A	3.6	A	14.6	A	29.9	A	51.9	A
Paper Manufacturing	99.3	A	1.3	A	5.5	A	16.4	A	32.6	A	44.3	A
Printing and Related Support Activities	98.9	A	0.0	A	4.1	A	14.8	A	29.6	A	51.5	B
Petroleum and Coal Products Manufacturing	100.0	A	0.0	A	3.7	A	13.0	A	31.5	A	51.9	A
Chemical Manufacturing (excluding 3254)	99.1	A	0.6	A	4.7	A	12.5	A	38.0	A	44.2	A
Pharmaceutical and Medicine Manufacturing (3254)	98.4	A	4.4	A	1.9	A	17.2	A	31.1	B	45.4	B
Plastics and Rubber Products Manufacturing	99.1	A	0.6	A	4.2	A	11.8	A	30.5	A	52.9	A
Non-Metallic Mineral Products Manufacturing	98.6	A	0.8	A	0.9	A	18.8	A	29.2	A	50.3	A
Primary Metal Manufacturing	99.5	A	1.7	A	7.3	A	12.3	A	32.8	A	45.9	A
Fabricated Metal Product Manufacturing	98.5	A	0.8	A	3.3	A	10.9	A	31.3	A	53.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0	A	0.5	A	1.9	A	7.9	A	33.6	A	56.1	A
Machinery Manufacturing (excluding 3331 & 3332)	98.7	A	1.5	A	3.7	A	14.3	A	32.6	A	48.0	A
Computer and Peripheral Equipment Manufacturing	97.8	A	2.3	A	7.2	A	8.0	A	35.6	B	47.0	B
Communications Equipment Manufacturing	100.0	A	0.0	A	1.6	A	8.0	A	47.3	A	43.1	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	0.0	A	7.3	A	17.7	A	24.9	B	50.1	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	0.0	A	1.0	A	11.4	A	37.0	B	50.7	B
Electrical Equipment, Appliance and Component Manufacturing	100.0	A	1.9	A	3.4	A	7.1	A	42.5	A	45.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.3	A	0.0	A	2.2	A	12.9	A	27.0	A	58.0	A
Aerospace Product and Parts Manufacturing	98.0	A	1.7	A	4.4	A	6.2	A	35.1	B	52.6	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	0.0	A	0.0	A	13.0	A	30.1	B	56.9	B
Furniture and Related Products Manufacturing	97.3	A	1.9	A	3.6	A	10.0	A	32.0	A	52.5	A
Miscellaneous Manufacturing	98.0	A	2.4	A	1.3	A	10.4	A	20.9	A	65.0	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Providing after-hour client support services												
Total Manufacturing Industries	90.3	A	12.2	A	18.9	A	24.7	A	22.7	A	21.4	A
Food Manufacturing	89.7	A	12.2	A	18.5	A	24.7	A	26.7	A	18.0	A
Beverage and Tobacco Product Manufacturing	88.1	A	2.5	A	16.7	A	30.8	A	29.2	A	20.9	A
Textile Mills	92.4	A	11.3	A	12.5	A	31.1	A	30.7	A	14.3	A
Textile Product Mills	85.8	A	26.0	B	18.1	B	25.7	B	22.1	B	8.1	A
Clothing Manufacturing	78.2	A	25.4	A	22.9	A	22.8	A	18.4	A	10.4	A
Leather and Allied Product Manufacturing	93.5	A	17.8	B	43.5	B	16.2	B	14.4	B	8.1	A
Sawmills and Wood Preservation	70.1	A	18.5	A	18.8	A	31.6	A	13.3	A	17.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing	87.8	A	23.9	A	16.2	A	28.5	A	16.6	A	14.8	A
Other Wood Product Manufacturing	84.4	A	13.5	A	20.1	A	23.6	A	21.3	A	21.5	A
Paper Manufacturing	94.2	A	12.1	A	17.9	A	26.3	A	28.7	A	14.9	A
Printing and Related Support Activities	96.6	A	6.3	A	18.2	A	22.8	A	18.0	A	34.7	A
Petroleum and Coal Products Manufacturing	87.0	A	5.3	A	22.3	A	31.9	A	27.7	A	12.8	A
Chemical Manufacturing (excluding 3254)	93.5	A	6.0	A	19.1	A	26.3	A	25.9	A	22.7	A
Pharmaceutical and Medicine Manufacturing (3254)	87.7	A	10.4	A	17.8	A	29.0	A	22.4	A	20.4	A
Plastics and Rubber Products Manufacturing	90.5	A	9.0	A	19.1	A	29.7	A	25.3	A	17.0	A
Non-Metallic Mineral Products Manufacturing	92.1	A	12.8	A	17.8	A	18.0	A	26.9	A	24.5	A
Primary Metal Manufacturing	88.0	A	16.6	A	26.4	A	25.9	A	17.1	A	14.0	A
Fabricated Metal Product Manufacturing	90.7	A	14.6	A	17.1	A	25.0	A	21.4	A	21.9	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	97.6	A	2.2	A	15.6	A	22.2	A	26.2	A	33.8	A
Machinery Manufacturing (excluding 3331 & 3332)	92.9	A	7.4	A	16.5	A	22.9	A	22.0	A	31.2	A
Computer and Peripheral Equipment Manufacturing	91.1	A	7.9	A	25.4	B	16.7	B	12.6	A	37.4	B
Communications Equipment Manufacturing	95.3	A	4.8	A	17.5	B	25.3	A	32.9	B	19.6	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	93.6	A	12.3	A	14.4	A	25.6	B	25.5	B	22.2	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	6.0	A	17.3	A	23.9	B	22.9	A	29.9	B
Electrical Equipment, Appliance and Component Manufacturing	96.9	A	8.3	A	23.5	A	26.0	A	23.0	A	19.2	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	89.6	A	7.4	A	19.0	A	22.9	A	26.9	A	23.9	A
Aerospace Product and Parts Manufacturing	87.9	A	8.4	A	10.6	A	24.9	B	36.9	B	19.1	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	96.6	A	6.7	B	16.0	A	16.1	A	18.7	B	42.5	B
Furniture and Related Products Manufacturing	86.4	A	18.3	A	22.2	A	21.8	A	24.6	A	13.2	A
Miscellaneous Manufacturing	91.8	A	16.8	A	19.5	A	26.7	A	14.8	A	22.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Hiring new graduates from universities												
Total Manufacturing Industries	91.9	A	21.3	A	25.7	A	30.8	A	17.0	A	5.2	A
Food Manufacturing	93.2	A	20.8	A	23.6	A	33.5	A	16.5	A	5.6	A
Beverage and Tobacco Product Manufacturing	93.4	A	17.2	A	17.5	A	39.8	A	17.1	A	8.3	A
Textile Mills	95.5	A	17.9	A	15.1	A	44.4	A	18.6	A	3.9	A
Textile Product Mills	88.8	A	36.5	B	21.0	B	31.7	B	10.8	A	0.0	A
Clothing Manufacturing	84.9	A	37.9	A	27.5	A	26.0	A	7.8	A	0.7	A
Leather and Allied Product Manufacturing	92.6	A	22.9	B	47.7	B	18.7	B	7.9	A	2.8	A
Sawmills and Wood Preservation	86.3	A	20.4	A	24.5	A	35.3	A	12.0	A	7.8	A
Veneer, Plywood and Engineered Wood Product Manufacturing	94.3	A	22.4	A	27.9	A	28.6	A	17.2	A	3.9	A
Other Wood Product Manufacturing	87.3	A	34.7	A	29.1	A	25.0	A	6.4	A	4.8	A
Paper Manufacturing	97.4	A	17.9	A	23.1	A	33.2	A	18.9	A	6.8	A
Printing and Related Support Activities	92.6	A	24.4	A	32.0	A	30.2	A	10.0	A	3.4	A
Petroleum and Coal Products Manufacturing	98.1	A	15.1	A	17.0	A	28.3	A	22.6	A	17.0	A
Chemical Manufacturing (excluding 3254)	95.2	A	9.3	A	24.3	A	35.0	A	24.4	A	7.1	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	7.5	A	26.0	A	37.0	A	24.4	A	5.1	A
Plastics and Rubber Products Manufacturing	91.7	A	19.5	A	25.4	A	30.5	A	16.1	A	8.5	A
Non-Metallic Mineral Products Manufacturing	89.3	A	24.3	A	28.5	A	22.6	A	16.6	A	8.1	A
Primary Metal Manufacturing	95.6	A	23.1	A	19.9	A	26.7	A	20.8	A	9.5	A
Fabricated Metal Product Manufacturing	89.0	A	22.0	A	26.6	A	34.5	A	14.3	A	2.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.0	A	15.4	A	22.5	A	37.1	A	19.0	A	6.0	A
Machinery Manufacturing (excluding 3331 & 3332)	93.0	A	15.3	A	24.7	A	32.4	A	23.0	A	4.5	A
Computer and Peripheral Equipment Manufacturing	97.8	A	14.8	A	27.5	B	12.5	B	21.0	A	24.2	B
Communications Equipment Manufacturing	98.5	A	7.4	A	15.6	B	19.3	A	51.6	B	6.2	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	15.6	A	23.9	A	21.8	B	19.9	B	18.9	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	97.3	A	9.0	A	20.4	A	25.3	B	31.4	B	13.8	A
Electrical Equipment, Appliance and Component Manufacturing	96.1	A	13.2	A	23.7	A	29.8	A	25.7	A	7.6	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	95.2	A	20.0	A	19.7	A	29.7	A	27.4	A	3.3	A
Aerospace Product and Parts Manufacturing	96.3	A	14.6	A	31.7	B	28.9	B	18.5	A	6.3	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	95.3	A	25.9	B	31.0	B	25.4	B	16.3	B	1.4	A
Furniture and Related Products Manufacturing	88.1	A	18.7	A	40.1	A	24.8	A	13.4	A	3.0	A
Miscellaneous Manufacturing	92.0	A	31.6	A	18.7	A	29.4	B	16.6	A	3.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Hiring new graduates from technical schools and colleges												
Total Manufacturing Industries	94.9	A	11.2	A	19.0	A	30.1	A	28.4	A	11.3	A
Food Manufacturing	92.9	A	14.9	A	20.3	A	31.5	A	25.7	A	7.6	A
Beverage and Tobacco Product Manufacturing	92.5	A	9.2	A	15.9	A	37.4	A	31.5	A	6.0	A
Textile Mills	97.3	A	14.9	A	13.5	A	24.7	A	29.8	A	17.1	A
Textile Product Mills	91.4	A	24.7	B	30.6	B	25.0	B	18.1	B	1.7	A
Clothing Manufacturing	88.4	A	23.5	A	21.6	A	35.3	A	14.9	A	4.7	A
Leather and Allied Product Manufacturing	88.3	A	19.9	B	32.4	B	23.8	B	8.8	A	15.2	B
Sawmills and Wood Preservation	92.4	A	8.3	A	17.6	A	33.9	A	29.7	A	10.4	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.2	A	7.3	A	17.2	A	32.0	A	39.0	B	4.6	A
Other Wood Product Manufacturing	94.0	A	19.1	A	25.2	A	29.5	A	17.3	A	8.9	A
Paper Manufacturing	97.8	A	10.2	A	17.9	A	33.9	A	29.3	A	8.7	A
Printing and Related Support Activities	97.1	A	10.8	A	20.8	A	28.7	A	26.4	A	13.4	A
Petroleum and Coal Products Manufacturing	100.0	A	6.5	A	9.3	A	41.7	A	33.3	A	9.3	A
Chemical Manufacturing (excluding 3254)	96.8	A	6.5	A	21.8	A	33.8	A	29.8	A	8.1	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	8.6	A	28.0	A	30.7	A	22.5	A	10.2	A
Plastics and Rubber Products Manufacturing	94.6	A	9.9	A	17.3	A	29.9	A	31.0	A	11.8	A
Non-Metallic Mineral Products Manufacturing	90.9	A	18.7	A	21.4	A	26.5	A	22.1	A	11.3	A
Primary Metal Manufacturing	96.0	A	9.9	A	21.0	A	28.5	A	28.0	A	12.6	A
Fabricated Metal Product Manufacturing	94.9	A	8.4	A	17.0	A	33.9	A	27.1	A	13.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.6	A	4.1	A	18.1	A	35.5	A	31.5	A	10.8	A
Machinery Manufacturing (excluding 3331 & 3332)	96.1	A	5.8	A	9.9	A	28.1	A	39.1	A	17.1	A
Computer and Peripheral Equipment Manufacturing	100.0	A	11.5	A	22.8	B	16.3	B	20.9	B	28.5	B
Communications Equipment Manufacturing	100.0	A	4.9	A	6.5	A	23.2	B	56.3	B	9.1	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	11.4	A	19.9	A	23.1	A	30.1	B	15.6	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	5.3	A	15.7	A	28.6	B	38.0	B	12.4	A
Electrical Equipment, Appliance and Component Manufacturing	100.0	A	4.5	A	19.5	A	32.1	A	33.2	A	10.8	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	97.0	A	10.8	A	13.2	A	24.6	A	39.7	A	11.7	A
Aerospace Product and Parts Manufacturing	96.3	A	0.0	A	11.9	A	22.6	B	40.8	B	24.8	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	96.6	A	6.7	A	22.2	B	22.7	B	28.0	B	20.4	B
Furniture and Related Products Manufacturing	92.0	A	10.7	A	26.6	A	27.7	A	26.4	A	8.6	A
Miscellaneous Manufacturing	95.2	A	15.1	A	20.4	A	21.3	A	30.0	B	13.3	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Hiring experienced employees												
Total Manufacturing Industries	98.5	A	2.2	A	7.2	A	21.4	A	42.7	A	26.5	A
Food Manufacturing	98.3	A	2.0	A	8.4	A	26.5	A	43.3	A	19.8	A
Beverage and Tobacco Product Manufacturing	98.7	A	4.1	A	12.0	A	21.0	A	45.3	A	17.6	A
Textile Mills	98.7	A	3.2	A	7.8	A	15.8	A	50.4	A	22.8	A
Textile Product Mills	97.6	A	3.1	A	8.0	B	25.8	B	44.2	B	18.9	A
Clothing Manufacturing	96.3	A	2.5	A	3.3	A	17.9	A	42.6	A	33.7	A
Leather and Allied Product Manufacturing	100.0	A	3.7	A	14.9	A	22.3	B	36.8	B	22.3	B
Sawmills and Wood Preservation	97.2	A	1.0	A	2.9	A	16.0	A	51.3	A	28.7	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.2	A	5.0	A	13.4	A	21.9	A	38.3	B	21.4	A
Other Wood Product Manufacturing	100.0	A	5.5	A	8.7	A	30.2	A	32.7	A	22.8	A
Paper Manufacturing	98.3	A	4.6	A	6.2	A	33.8	A	39.6	A	15.8	A
Printing and Related Support Activities	99.6	A	1.4	A	4.1	A	14.5	A	42.3	A	37.7	A
Petroleum and Coal Products Manufacturing	98.1	A	0.0	A	5.7	A	36.8	A	32.1	A	25.5	A
Chemical Manufacturing (excluding 3254)	96.8	A	2.4	A	12.6	A	23.1	A	46.5	A	15.4	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	0.0	A	5.6	A	16.7	A	54.4	B	23.3	A
Plastics and Rubber Products Manufacturing	98.2	A	2.7	A	9.2	A	20.1	A	43.7	A	24.3	A
Non-Metallic Mineral Products Manufacturing	98.4	A	3.1	A	11.8	A	25.4	A	37.5	A	22.2	A
Primary Metal Manufacturing	97.9	A	3.3	A	12.0	A	26.1	A	40.9	A	17.7	A
Fabricated Metal Product Manufacturing	99.0	A	1.2	A	5.6	A	21.9	A	39.3	A	32.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.6	A	0.0	A	3.2	A	15.6	A	53.2	A	28.0	A
Machinery Manufacturing (excluding 3331 & 3332)	98.9	A	2.8	A	3.3	A	15.7	A	46.5	A	31.6	A
Computer and Peripheral Equipment Manufacturing	100.0	A	2.2	A	2.2	A	10.4	B	49.4	B	35.7	B
Communications Equipment Manufacturing	100.0	A	1.5	A	1.5	A	28.1	A	56.4	B	12.5	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	2.0	A	2.0	A	15.4	A	39.3	B	41.2	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	0.0	A	5.2	A	21.5	B	47.4	B	25.8	B
Electrical Equipment, Appliance and Component Manufacturing	98.2	A	1.4	A	12.6	A	29.0	A	37.7	A	19.3	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.6	A	1.7	A	8.2	A	24.6	A	42.3	A	23.2	A
Aerospace Product and Parts Manufacturing	100.0	A	0.0	A	3.7	A	18.5	B	28.3	B	49.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	0.0	A	9.9	A	13.7	B	35.7	B	40.7	B
Furniture and Related Products Manufacturing	96.8	A	2.5	A	5.2	A	18.2	A	46.0	A	28.0	A
Miscellaneous Manufacturing	99.3	A	2.8	A	11.6	A	16.8	A	41.1	B	27.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

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Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Recruiting skilled people from outside of Canada												
Total Manufacturing Industries	82.6	A	49.5	A	25.9	A	14.7	A	6.3	A	3.7	A
Food Manufacturing	82.3	A	54.6	A	23.9	A	13.5	A	6.2	A	1.8	A
Beverage and Tobacco Product Manufacturing	82.0	A	46.1	A	27.8	A	14.9	A	5.5	A	5.8	A
Textile Mills	87.8	A	47.3	A	20.4	A	16.0	A	11.1	A	5.2	A
Textile Product Mills	87.5	A	49.7	B	28.1	B	18.2	B	0.9	A	3.2	A
Clothing Manufacturing	70.7	A	47.8	A	17.9	A	18.5	A	9.5	A	6.4	A
Leather and Allied Product Manufacturing	79.4	B	45.2	B	14.4	B	9.5	A	18.8	B	12.0	A
Sawmills and Wood Preservation	72.0	A	51.4	A	36.9	A	7.0	A	2.4	A	2.3	A
Veneer, Plywood and Engineered Wood Product Manufacturing	80.6	A	57.7	B	25.9	A	11.8	A	1.3	A	3.3	A
Other Wood Product Manufacturing	80.0	A	63.6	A	20.4	A	8.6	A	6.0	A	1.5	A
Paper Manufacturing	87.2	A	58.4	A	27.5	A	10.9	A	2.9	A	0.4	A
Printing and Related Support Activities	82.1	A	61.1	B	22.4	A	12.2	A	1.8	A	2.5	A
Petroleum and Coal Products Manufacturing	81.5	A	58.0	A	26.1	A	15.9	A	0.0	A	0.0	A
Chemical Manufacturing (excluding 3254)	86.6	A	49.9	A	31.1	A	13.9	A	4.0	A	1.1	A
Pharmaceutical and Medicine Manufacturing (3254)	92.0	A	38.9	B	23.1	B	22.7	A	12.4	A	2.9	A
Plastics and Rubber Products Manufacturing	84.5	A	49.3	A	28.3	A	15.2	A	5.5	A	1.7	A
Non-Metallic Mineral Products Manufacturing	74.2	A	59.8	A	20.8	A	9.1	A	5.9	A	4.5	A
Primary Metal Manufacturing	87.9	A	50.6	A	27.1	A	13.8	A	5.5	A	3.0	A
Fabricated Metal Product Manufacturing	81.0	A	48.6	A	25.1	A	15.5	A	4.6	A	6.2	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	87.1	A	44.2	A	28.9	A	18.8	A	4.8	A	3.3	A
Machinery Manufacturing (excluding 3331 & 3332)	85.4	A	36.2	A	32.7	A	20.0	A	8.0	A	3.0	A
Computer and Peripheral Equipment Manufacturing	97.8	A	29.5	B	28.0	B	21.2	B	9.8	B	11.4	A
Communications Equipment Manufacturing	95.3	A	34.0	B	38.5	B	14.4	A	11.5	A	1.6	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	95.8	A	36.8	B	13.0	A	22.6	B	13.3	A	14.2	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	88.2	A	30.9	B	34.7	A	15.5	A	9.8	A	9.0	A
Electrical Equipment, Appliance and Component Manufacturing	91.4	A	46.9	A	30.2	A	11.5	A	7.3	A	4.2	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	90.4	A	39.8	A	30.5	A	17.9	A	8.7	A	3.1	A
Aerospace Product and Parts Manufacturing	92.0	A	37.6	B	19.4	B	26.6	B	9.9	A	6.4	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	87.9	A	55.4	B	29.5	B	3.2	A	10.4	A	1.5	A
Furniture and Related Products Manufacturing	78.0	A	51.9	A	20.6	A	16.9	A	7.0	A	3.7	A
Miscellaneous Manufacturing	83.1	A	47.8	B	23.5	B	12.1	A	11.1	A	5.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Training employees												
Total Manufacturing Industries	98.9	A	1.0	A	3.0	A	15.8	A	40.3	A	39.9	A
Food Manufacturing	98.8	A	1.6	A	3.1	A	15.8	A	36.3	A	43.3	A
Beverage and Tobacco Product Manufacturing	100.0	A	3.5	A	1.1	A	8.2	A	46.6	A	40.5	A
Textile Mills	98.0	A	1.4	A	1.3	A	7.9	A	36.5	A	53.0	A
Textile Product Mills	98.5	A	0.0	A	4.5	A	23.1	B	44.9	B	27.5	B
Clothing Manufacturing	97.4	A	0.9	A	7.2	A	29.7	A	37.7	A	24.4	A
Leather and Allied Product Manufacturing	98.7	A	0.0	A	5.0	A	20.4	B	44.3	B	30.3	B
Sawmills and Wood Preservation	95.5	A	0.4	A	2.6	A	15.4	A	36.2	A	45.4	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	7.3	A	1.1	A	7.6	A	44.1	A	40.0	A
Other Wood Product Manufacturing	100.0	A	2.5	A	5.2	A	20.6	A	38.1	A	33.6	A
Paper Manufacturing	99.6	A	0.4	A	1.3	A	10.7	A	37.2	A	50.5	A
Printing and Related Support Activities	99.0	A	1.4	A	3.3	A	15.4	A	37.5	A	42.3	A
Petroleum and Coal Products Manufacturing	100.0	A	1.9	A	3.7	A	4.6	A	48.1	A	41.7	A
Chemical Manufacturing (excluding 3254)	99.5	A	0.5	A	2.4	A	13.0	A	40.1	A	44.0	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	0.0	A	0.0	A	14.6	A	35.7	A	49.6	A
Plastics and Rubber Products Manufacturing	99.2	A	0.7	A	4.3	A	11.5	A	35.1	A	48.4	A
Non-Metallic Mineral Products Manufacturing	99.7	A	0.3	A	3.5	A	19.0	A	36.1	A	41.1	A
Primary Metal Manufacturing	100.0	A	0.7	A	1.0	A	11.0	A	44.6	A	42.6	A
Fabricated Metal Product Manufacturing	98.7	A	1.0	A	3.2	A	15.5	A	43.5	A	36.8	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.2	A	0.0	A	3.0	A	20.5	A	44.7	A	31.9	A
Machinery Manufacturing (excluding 3331 & 3332)	99.7	A	0.6	A	1.0	A	16.9	A	43.3	A	38.2	A
Computer and Peripheral Equipment Manufacturing	100.0	A	0.0	A	0.0	A	18.9	A	36.1	B	45.0	B
Communications Equipment Manufacturing	100.0	A	0.0	A	3.0	A	11.9	A	54.3	B	30.7	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	0.0	A	0.0	A	16.6	A	56.1	B	27.3	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	0.0	A	0.0	A	15.2	A	38.8	A	46.0	B
Electrical Equipment, Appliance and Component Manufacturing	98.2	A	0.0	A	3.9	A	16.5	A	43.4	A	36.3	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.2	A	1.2	A	1.3	A	13.3	A	39.3	A	45.0	A
Aerospace Product and Parts Manufacturing	100.0	A	0.0	A	0.0	A	11.3	B	40.2	B	48.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	97.9	A	0.0	A	2.2	A	12.9	A	39.0	B	45.9	B
Furniture and Related Products Manufacturing	97.8	A	1.7	A	0.9	A	16.0	A	43.4	A	38.0	A
Miscellaneous Manufacturing	99.3	A	0.9	A	4.7	A	13.6	A	42.4	B	38.5	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Using teams within your firm which bring together people with different skills												
Total Manufacturing Industries	92.2	A	5.9	A	10.1	A	25.9	A	33.4	A	24.8	A
Food Manufacturing	93.8	A	6.2	A	11.8	A	23.2	A	34.9	A	23.9	A
Beverage and Tobacco Product Manufacturing	96.9	A	8.2	A	2.3	A	24.4	A	41.1	A	23.9	A
Textile Mills	91.2	A	5.0	A	7.7	A	29.0	A	32.5	A	25.7	A
Textile Product Mills	98.5	A	6.6	A	17.1	B	24.2	A	34.0	B	18.1	B
Clothing Manufacturing	79.6	A	8.2	A	12.8	A	33.1	A	28.7	A	17.2	A
Leather and Allied Product Manufacturing	83.1	A	3.1	A	17.2	A	26.6	B	32.3	B	20.8	B
Sawmills and Wood Preservation	88.2	A	5.9	A	12.1	A	27.3	A	32.8	A	21.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing	89.4	A	4.2	A	19.7	A	23.7	A	22.5	A	29.8	A
Other Wood Product Manufacturing	93.0	A	12.2	A	12.9	A	31.0	A	28.8	A	15.2	A
Paper Manufacturing	98.9	A	4.4	A	9.1	A	23.3	A	37.9	A	25.3	A
Printing and Related Support Activities	93.9	A	8.0	A	6.1	A	27.7	A	30.8	A	27.4	A
Petroleum and Coal Products Manufacturing	96.3	A	1.9	A	11.5	A	21.2	A	30.8	A	34.6	A
Chemical Manufacturing (excluding 3254)	95.0	A	5.2	A	4.8	A	22.1	A	36.9	A	31.0	A
Pharmaceutical and Medicine Manufacturing (3254)	93.6	A	1.7	A	1.7	A	21.4	A	34.9	A	40.3	B
Plastics and Rubber Products Manufacturing	95.6	A	4.8	A	10.1	A	18.0	A	36.0	A	31.2	A
Non-Metallic Mineral Products Manufacturing	89.5	A	10.2	A	14.8	A	27.6	A	25.4	A	22.0	A
Primary Metal Manufacturing	95.6	A	5.4	A	5.7	A	21.4	A	34.6	A	32.8	A
Fabricated Metal Product Manufacturing	90.9	A	4.9	A	11.5	A	31.4	A	32.8	A	19.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	94.1	A	7.1	A	10.9	A	25.6	A	37.4	A	19.0	A
Machinery Manufacturing (excluding 3331 & 3332)	95.0	A	2.9	A	10.9	A	25.7	A	36.7	A	23.8	A
Computer and Peripheral Equipment Manufacturing	100.0	A	7.8	A	8.9	A	21.7	B	29.3	B	32.4	B
Communications Equipment Manufacturing	96.8	A	0.0	A	1.6	A	42.7	A	32.3	B	23.5	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	98.0	A	7.3	A	7.4	A	12.9	A	52.7	B	19.7	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	96.5	A	5.5	A	9.9	A	15.5	A	35.7	B	33.4	B
Electrical Equipment, Appliance and Component Manufacturing	96.0	A	2.5	A	10.0	A	26.1	A	29.9	A	31.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	96.5	A	6.8	A	6.0	A	20.6	A	35.7	A	30.9	A
Aerospace Product and Parts Manufacturing	97.3	A	7.1	A	3.8	A	21.2	B	34.0	B	34.0	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	85.3	A	3.6	A	4.0	A	23.0	B	39.7	B	29.7	B
Furniture and Related Products Manufacturing	85.3	A	7.1	A	10.0	A	31.2	A	27.1	A	24.6	A
Miscellaneous Manufacturing	91.3	A	4.9	A	9.3	A	21.8	A	36.9	B	27.0	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Performing research and development within your firm												
Total Manufacturing Industries	92.6	A	8.0	A	14.0	A	21.7	A	28.8	A	27.6	A
Food Manufacturing	95.0	A	6.8	A	13.9	A	19.3	A	31.2	A	28.7	A
Beverage and Tobacco Product Manufacturing	97.4	A	9.2	A	20.6	A	21.9	A	25.1	A	23.2	A
Textile Mills	94.4	A	4.3	A	4.8	A	19.6	A	23.0	A	48.4	A
Textile Product Mills	98.4	A	5.2	A	20.8	B	11.9	A	39.6	B	22.6	B
Clothing Manufacturing	85.1	A	9.7	A	12.8	A	25.0	A	31.3	A	21.3	A
Leather and Allied Product Manufacturing	95.2	A	1.4	A	1.4	A	32.7	B	20.9	B	43.6	B
Sawmills and Wood Preservation	85.8	A	12.5	A	16.9	A	30.5	A	23.7	A	16.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	90.7	A	5.8	A	21.6	A	20.4	A	31.3	B	20.9	A
Other Wood Product Manufacturing	94.0	A	5.8	A	23.2	A	29.1	A	28.0	A	14.0	A
Paper Manufacturing	95.1	A	9.0	A	17.7	A	23.5	A	31.9	A	17.9	A
Printing and Related Support Activities	90.4	A	14.8	A	18.7	A	23.8	A	29.4	A	13.2	A
Petroleum and Coal Products Manufacturing	96.3	A	14.4	A	17.3	A	13.5	A	29.8	A	25.0	A
Chemical Manufacturing (excluding 3254)	96.0	A	2.6	A	12.2	A	19.8	A	26.1	A	39.4	A
Pharmaceutical and Medicine Manufacturing (3254)	96.8	A	1.7	A	6.3	A	15.4	A	21.8	A	54.9	B
Plastics and Rubber Products Manufacturing	95.4	A	4.4	A	8.0	A	19.9	A	29.6	A	38.1	A
Non-Metallic Mineral Products Manufacturing	91.5	A	12.6	A	14.0	A	27.2	A	27.9	A	18.3	A
Primary Metal Manufacturing	93.2	A	4.5	A	15.1	A	23.6	A	38.9	A	17.9	A
Fabricated Metal Product Manufacturing	87.5	A	10.4	A	19.8	A	24.6	A	25.0	A	20.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.0	A	3.0	A	9.1	A	16.6	A	23.3	A	48.0	A
Machinery Manufacturing (excluding 3331 & 3332)	95.7	A	3.1	A	11.7	A	16.8	A	39.0	A	29.4	A
Computer and Peripheral Equipment Manufacturing	100.0	A	12.8	B	4.4	A	9.8	B	19.3	B	53.7	B
Communications Equipment Manufacturing	100.0	A	1.5	A	14.8	A	3.6	A	22.3	B	57.8	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	84.7	A	0.0	A	7.7	A	9.9	A	24.8	B	57.5	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	97.6	A	2.6	A	5.2	A	19.4	A	23.0	A	49.8	B
Electrical Equipment, Appliance and Component Manufacturing	94.9	A	6.2	A	12.3	A	18.8	A	32.1	A	30.6	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	91.4	A	11.0	A	8.4	A	12.2	A	34.1	A	34.3	A
Aerospace Product and Parts Manufacturing	97.3	A	17.2	B	13.6	A	17.0	A	23.0	B	29.3	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	93.6	A	12.8	B	11.7	B	24.2	B	23.3	B	28.1	B
Furniture and Related Products Manufacturing	91.8	A	6.5	A	10.5	A	30.6	A	29.3	A	23.2	A
Miscellaneous Manufacturing	95.1	A	14.5	A	12.3	A	18.5	A	19.5	A	35.2	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Involvement in collaboration and cooperation with other firms												
Total Manufacturing Industries	90.5	A	15.8	A	21.6	A	29.7	A	23.3	A	9.5	A
Food Manufacturing	92.2	A	12.6	A	22.5	A	32.0	A	21.1	A	11.9	A
Beverage and Tobacco Product Manufacturing	94.2	A	19.6	A	23.3	A	33.6	A	18.7	A	4.7	A
Textile Mills	93.7	A	9.4	A	20.0	A	35.4	A	25.2	A	9.9	A
Textile Product Mills	96.4	A	14.5	B	27.6	B	39.9	B	12.8	A	5.2	A
Clothing Manufacturing	78.6	A	26.0	A	25.0	A	26.2	A	15.5	A	7.3	A
Leather and Allied Product Manufacturing	91.1	A	27.8	B	20.4	B	19.0	B	28.5	B	4.3	A
Sawmills and Wood Preservation	88.9	A	20.5	A	17.9	A	29.1	A	25.3	A	7.2	A
Veneer, Plywood and Engineered Wood Product Manufacturing	85.5	A	14.5	A	14.0	A	38.0	B	27.6	B	5.8	A
Other Wood Product Manufacturing	87.2	A	19.2	A	25.6	A	33.7	A	18.0	A	3.5	A
Paper Manufacturing	90.6	A	17.9	A	16.7	A	36.8	A	23.9	A	4.7	A
Printing and Related Support Activities	91.9	A	17.2	A	21.8	A	28.5	A	20.7	A	11.8	A
Petroleum and Coal Products Manufacturing	92.6	A	2.0	A	14.0	A	40.0	A	30.0	A	14.0	A
Chemical Manufacturing (excluding 3254)	91.1	A	11.2	A	20.0	A	27.6	A	32.5	A	8.7	A
Pharmaceutical and Medicine Manufacturing (3254)	89.5	A	8.4	A	17.5	B	23.0	A	31.1	B	20.0	A
Plastics and Rubber Products Manufacturing	91.6	A	15.0	A	19.1	A	28.3	A	22.6	A	15.0	A
Non-Metallic Mineral Products Manufacturing	85.9	A	21.4	A	20.8	A	30.0	A	20.4	A	7.5	A
Primary Metal Manufacturing	87.7	A	20.1	A	24.0	A	26.8	A	20.8	A	8.3	A
Fabricated Metal Product Manufacturing	90.7	A	17.3	A	22.7	A	32.8	A	18.5	A	8.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	95.5	A	11.2	A	14.9	A	29.0	A	32.2	A	12.7	A
Machinery Manufacturing (excluding 3331 & 3332)	95.4	A	10.4	A	21.1	A	31.5	A	27.6	A	9.4	A
Computer and Peripheral Equipment Manufacturing	97.2	A	12.4	B	12.6	A	14.5	B	44.6	B	16.0	A
Communications Equipment Manufacturing	98.4	A	5.5	A	19.5	A	26.8	A	29.8	B	18.3	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	90.8	A	13.9	A	20.4	A	25.6	A	26.1	B	14.0	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	97.5	A	3.6	A	25.9	B	14.1	A	37.6	B	18.8	A
Electrical Equipment, Appliance and Component Manufacturing	95.9	A	10.5	A	24.2	A	24.4	A	29.5	A	11.3	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	90.6	A	17.2	A	23.4	A	27.2	A	26.0	A	6.2	A
Aerospace Product and Parts Manufacturing	91.2	A	3.8	A	27.2	B	27.1	B	27.3	B	14.6	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	82.3	B	4.7	A	25.6	B	35.3	B	26.0	B	8.4	B
Furniture and Related Products Manufacturing	84.6	A	21.6	A	24.3	A	25.4	A	21.3	A	7.3	A
Miscellaneous Manufacturing	93.1	A	16.7	A	19.6	A	27.2	B	26.5	A	10.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Developing new products (goods or services) and processes												
Total Manufacturing Industries	94.9	A	4.5	A	8.7	A	19.0	A	33.9	A	33.9	A
Food Manufacturing	96.6	A	2.4	A	6.2	A	20.6	A	34.5	A	36.4	A
Beverage and Tobacco Product Manufacturing	94.2	A	9.0	A	9.1	A	23.6	A	36.7	A	21.6	A
Textile Mills	98.1	A	3.3	A	3.3	A	12.0	A	28.2	A	53.2	A
Textile Product Mills	98.4	A	0.0	A	7.0	A	10.9	B	39.0	B	43.2	B
Clothing Manufacturing	91.5	A	4.9	A	6.6	A	16.7	A	30.3	A	41.6	A
Leather and Allied Product Manufacturing	94.8	A	4.8	A	3.7	A	6.4	A	46.3	B	38.8	B
Sawmills and Wood Preservation	93.6	A	4.6	A	14.2	A	24.7	A	35.0	A	21.4	A
Veneer, Plywood and Engineered Wood Product Manufacturing	89.6	A	2.6	A	11.9	A	30.1	A	26.0	A	29.4	A
Other Wood Product Manufacturing	95.1	A	6.5	A	17.8	A	27.1	A	25.8	A	22.8	A
Paper Manufacturing	96.7	A	8.1	A	10.0	A	25.6	A	32.5	A	23.9	A
Printing and Related Support Activities	96.3	A	5.9	A	14.4	A	21.9	A	31.1	A	26.7	A
Petroleum and Coal Products Manufacturing	92.6	A	4.0	A	13.0	A	24.0	A	39.0	A	20.0	A
Chemical Manufacturing (excluding 3254)	96.8	A	2.3	A	7.0	A	13.0	A	36.7	A	40.9	A
Pharmaceutical and Medicine Manufacturing (3254)	91.6	A	1.8	A	2.0	A	4.4	A	35.5	A	56.4	B
Plastics and Rubber Products Manufacturing	97.4	A	1.2	A	6.2	A	13.2	A	36.0	A	43.4	A
Non-Metallic Mineral Products Manufacturing	93.1	A	4.8	A	13.4	A	24.1	A	24.7	A	33.0	A
Primary Metal Manufacturing	92.5	A	5.2	A	8.1	A	29.7	A	36.8	A	20.2	A
Fabricated Metal Product Manufacturing	91.7	A	8.8	A	10.1	A	22.8	A	34.4	A	24.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.5	A	0.0	A	8.6	A	14.5	A	30.8	A	46.1	A
Machinery Manufacturing (excluding 3331 & 3332)	94.4	A	3.3	A	6.7	A	17.2	A	37.8	A	35.0	A
Computer and Peripheral Equipment Manufacturing	100.0	A	2.2	A	7.8	A	4.4	A	33.7	B	51.9	B
Communications Equipment Manufacturing	98.5	A	0.0	A	4.6	A	7.2	A	27.2	B	61.0	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	90.8	A	0.0	A	4.8	A	11.2	A	39.0	B	44.9	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	5.5	A	6.8	A	12.6	A	23.5	A	51.6	B
Electrical Equipment, Appliance and Component Manufacturing	97.8	A	1.2	A	10.1	A	15.0	A	38.7	A	35.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	92.6	A	4.1	A	9.1	A	15.5	A	38.6	A	32.7	A
Aerospace Product and Parts Manufacturing	87.5	A	6.7	A	10.8	A	18.5	B	37.2	B	26.9	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	92.3	A	1.4	A	11.8	B	15.2		41.4	B	30.3	B
Furniture and Related Products Manufacturing	94.7	A	4.3	A	5.7	A	18.9	A	38.2	A	32.9	A
Miscellaneous Manufacturing	98.6	A	5.6	A	4.2	A	15.6	A	33.5	B	41.0	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.1
Firm Success Factors
Factor by Industry
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Active involvement in developing new industry-wide standards												
Total Manufacturing Industries	90.2	A	15.1	A	21.6	A	28.5	A	23.1	A	11.7	A
Food Manufacturing	93.8	A	11.0	A	14.5	A	32.2	A	26.3	A	16.1	A
Beverage and Tobacco Product Manufacturing	96.0	A	7.2	A	26.2	A	25.4	A	29.7	A	11.6	A
Textile Mills	91.2	A	12.5	A	18.9	A	34.6	A	18.0	A	16.0	A
Textile Product Mills	90.8	A	20.3	B	27.5	B	21.2	B	25.8	B	5.2	A
Clothing Manufacturing	79.7	A	18.3	A	21.6	A	31.8	A	16.3	A	12.0	A
Leather and Allied Product Manufacturing	83.8	B	7.8	A	45.5	B	17.6	B	14.5	B	14.7	A
Sawmills and Wood Preservation	86.5	A	11.0	A	19.5	A	29.2	A	25.0	A	15.4	A
Veneer, Plywood and Engineered Wood Product Manufacturing	89.2	A	13.6	A	17.7	A	28.1	A	27.4	A	13.3	A
Other Wood Product Manufacturing	84.2	A	25.7	A	22.3	A	19.9	A	23.3	A	8.8	A
Paper Manufacturing	93.7	A	17.2	A	24.6	A	31.1	A	19.1	A	8.0	A
Printing and Related Support Activities	92.4	A	20.2	A	24.5	A	33.4	A	13.9	A	8.0	A
Petroleum and Coal Products Manufacturing	96.3	A	8.7	A	11.5	A	26.9	A	41.3	A	11.5	A
Chemical Manufacturing (excluding 3254)	93.2	A	6.8	A	20.8	A	31.3	A	28.3	A	12.8	A
Pharmaceutical and Medicine Manufacturing (3254)	92.5	A	13.3	A	29.3	B	19.9	A	24.8	A	12.8	A
Plastics and Rubber Products Manufacturing	94.2	A	14.6	A	22.4	A	30.6	A	21.1	A	11.3	A
Non-Metallic Mineral Products Manufacturing	91.7	A	18.4	A	18.4	A	23.1	A	26.3	A	13.9	A
Primary Metal Manufacturing	87.8	A	18.9	A	17.2	A	29.9	A	25.5	A	8.5	A
Fabricated Metal Product Manufacturing	89.8	A	19.9	A	17.0	A	29.4	A	23.2	A	10.5	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	91.6	A	16.5	A	29.3	A	24.7	A	20.9	A	8.5	A
Machinery Manufacturing (excluding 3331 & 3332)	92.1	A	10.7	A	27.7	A	28.4	A	23.6	A	9.6	A
Computer and Peripheral Equipment Manufacturing	97.4	A	15.4	B	18.6	B	21.7	B	16.9	B	27.4	A
Communications Equipment Manufacturing	95.5	A	8.1	A	25.9	B	24.0	A	30.5	A	11.6	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	85.7	A	18.2	A	21.9	B	23.2	B	24.6	A	12.2	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	98.1	A	6.9	A	22.3	A	25.0	B	28.4	B	17.4	A
Electrical Equipment, Appliance and Component Manufacturing	93.8	A	6.0	A	19.9	A	29.2	A	32.1	A	12.8	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	89.0	A	13.0	A	24.8	A	26.0	A	21.8	A	14.4	A
Aerospace Product and Parts Manufacturing	90.2	A	12.6	A	35.3	B	18.3	B	13.7	A	20.1	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	90.1	A	7.7	A	29.3	B	31.2	B	18.5	B	13.3	B
Furniture and Related Products Manufacturing	82.1	A	21.0	A	26.8	A	25.7	A	15.3	A	11.1	A
Miscellaneous Manufacturing	90.2	A	13.3	A	19.4	A	24.9	B	33.4	B	9.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Seeking new markets												
Total Manufacturing Industries	98.5	A	1.8	A	4.9	A	15.1	A	36.2	A	42.0	A
Food Manufacturing	97.9	A	2.6	A	3.7	A	13.6	A	33.3	A	46.8	A
Beverage and Tobacco Product Manufacturing	100.0	A	1.4	A	4.3	A	16.5	A	35.1	A	42.6	A
Textile Mills	96.9	A	3.8	A	5.2	A	16.3	A	32.6	A	42.0	A
Textile Product Mills	99.1	A	0.0	A	4.1	B	11.5	A	30.2	B	54.2	B
Clothing Manufacturing	99.4	A	0.3	A	1.5	A	16.0	A	29.0	A	53.2	A
Leather and Allied Product Manufacturing	100.0	A	3.0	A	6.9	A	12.3	B	22.8	B	55.0	B
Sawmills and Wood Preservation	97.1	A	2.4	A	2.4	A	13.9	A	36.5	A	44.8	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	1.7	A	11.3	A	6.5	A	42.5	B	38.1	B
Other Wood Product Manufacturing	99.4	A	1.5	A	4.5	A	10.5	A	39.6	A	43.9	A
Paper Manufacturing	98.2	A	4.4	A	1.6	A	17.5	A	34.5	A	41.9	A
Printing and Related Support Activities	98.3	A	0.0	A	3.3	A	17.0	A	40.4	B	39.3	B
Petroleum and Coal Products Manufacturing	97.6	A	0.0	A	0.0	A	27.5	A	40.0	A	32.5	A
Chemical Manufacturing (excluding 3254)	99.3	A	0.5	A	4.7	A	17.8	A	35.6	A	41.3	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	1.9	A	0.0	A	9.2	A	40.2	B	48.7	B
Plastics and Rubber Products Manufacturing	98.8	A	1.6	A	3.3	A	13.0	A	39.1	A	43.0	A
Non-Metallic Mineral Products Manufacturing	98.2	A	2.0	A	7.5	A	19.6	A	28.6	A	42.3	A
Primary Metal Manufacturing	99.4	A	3.7	A	4.5	A	16.7	A	42.0	A	33.1	A
Fabricated Metal Product Manufacturing	99.4	A	2.1	A	6.5	A	19.2	A	38.1	A	34.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.2	A	2.3	A	3.8	A	12.6	A	34.5	A	46.9	A
Machinery Manufacturing (excluding 3331 & 3332)	98.9	A	0.5	A	7.4	A	15.8	A	35.0	A	41.2	B
Computer and Peripheral Equipment Manufacturing	97.7	A	0.0	A	17.9	A	14.1	B	22.2	B	45.8	B
Communications Equipment Manufacturing	100.0	A	1.7	A	5.1	A	10.2	A	26.8	B	56.2	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	0.0	A	2.3	A	8.7	A	45.0	B	44.0	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	96.4	A	2.0	A	4.6	A	12.8	A	31.8	B	48.8	B
Electrical Equipment, Appliance and Component Manufacturing	99.2	A	2.1	A	5.4	A	14.8	A	36.3	A	41.4	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.3	A	2.5	A	4.7	A	14.6	A	38.2	B	40.0	B
Aerospace Product and Parts Manufacturing	95.9	A	2.0	A	12.2	B	12.0	B	34.9	B	38.8	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	2.3	A	11.7	B	7.3	B	44.4	B	34.2	B
Furniture and Related Products Manufacturing	97.9	A	3.9	A	6.4	A	12.5	A	41.9	A	35.4	A
Miscellaneous Manufacturing	96.3	A	1.8	A	5.0	A	11.1	A	37.0	B	45.1	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Satisfying existing clients												
Total Manufacturing Industries	99.5	A	0.2	A	0.3	A	2.0	A	16.7	A	80.8	A
Food Manufacturing	98.8	A	0.0	A	0.3	A	3.0	A	19.9	A	76.8	A
Beverage and Tobacco Product Manufacturing	100.0	A	0.0	A	0.0	A	0.0	A	22.6	A	77.4	A
Textile Mills	97.7	A	0.8	A	0.0	A	1.6	A	16.9	A	80.7	A
Textile Product Mills	100.0	A	0.0	A	0.0	A	0.9	A	22.7	B	76.3	B
Clothing Manufacturing	99.7	A	0.0	A	1.1	A	5.3	A	15.9	A	77.7	A
Leather and Allied Product Manufacturing	100.0	A	0.0	A	1.8	A	0.0	A	18.6	B	79.6	B
Sawmills and Wood Preservation	99.2	A	0.0	A	0.0	A	4.0	A	20.9	A	75.1	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	1.7	A	0.0	A	2.7	A	16.8	B	78.8	B
Other Wood Product Manufacturing	100.0	A	0.0	A	0.9	A	3.5	A	22.6	A	73.0	A
Paper Manufacturing	99.5	A	0.0	A	0.9	A	0.5	A	13.8	A	84.9	A
Printing and Related Support Activities	99.5	A	0.0	A	0.0	A	0.0	A	14.7	A	85.3	A
Petroleum and Coal Products Manufacturing	100.0	A	0.0	A	0.0	A	0.0	A	22.0	A	78.0	A
Chemical Manufacturing (excluding 3254)	99.6	A	0.5	A	0.3	A	1.4	A	19.3	A	78.5	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	0.0	A	0.0	A	0.0	A	17.9	A	82.1	A
Plastics and Rubber Products Manufacturing	100.0	A	0.7	A	0.4	A	3.2	A	13.0	A	82.7	A
Non-Metallic Mineral Products Manufacturing	100.0	A	0.5	A	0.0	A	1.5	A	13.6	A	84.4	A
Primary Metal Manufacturing	99.4	A	0.0	A	0.0	A	1.3	A	12.4	A	86.3	A
Fabricated Metal Product Manufacturing	99.8	A	0.3	A	0.3	A	1.5	A	14.5	A	83.5	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0	A	0.0	A	0.0	A	1.7	A	16.0	A	82.3	A
Machinery Manufacturing (excluding 3331 & 3332)	100.0	A	0.0	A	0.0	A	3.4	A	21.4	A	75.2	A
Computer and Peripheral Equipment Manufacturing	97.7	A	5.8	B	0.0	A	2.4	A	7.1	A	84.7	B
Communications Equipment Manufacturing	100.0	A	0.0	A	0.0	A	0.0	A	25.7	B	74.3	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	0.0	A	0.0	A	0.0	A	20.7	A	79.3	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	0.0	A	0.0	A	2.0	A	14.9	A	83.1	A
Electrical Equipment, Appliance and Component Manufacturing	100.0	A	1.1	A	0.0	A	1.5	A	17.9	A	79.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	99.3	A	0.0	A	0.4	A	0.7	A	12.9	A	85.9	A
Aerospace Product and Parts Manufacturing	100.0	A	0.0	A	0.0	A	2.0	A	12.6	A	85.4	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	0.0	A	0.0	A	1.7	A	22.1	A	76.1	B
Furniture and Related Products Manufacturing	98.5	A	0.0	A	0.0	A	2.8	A	17.0	A	80.2	A
Miscellaneous Manufacturing	99.5	A	0.0	A	1.0	A	0.5	A	11.2	A	87.3	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Developing niche or specialized markets												
Total Manufacturing Industries	97.0	A	1.5	A	5.9	A	18.5	A	37.1	A	37.1	A
Food Manufacturing	96.8	A	1.0	A	10.7	A	20.6	A	33.4	A	34.2	A
Beverage and Tobacco Product Manufacturing	98.2	A	1.4	A	7.5	A	18.0	A	42.5	A	30.5	A
Textile Mills	95.3	A	0.0	A	5.4	A	14.2	A	31.2	A	49.2	A
Textile Product Mills	94.2	A	0.0	A	1.0	A	21.9	B	31.8	B	45.3	B
Clothing Manufacturing	92.8	A	1.6	A	4.2	A	15.3	A	37.2	A	41.8	A
Leather and Allied Product Manufacturing	100.0	A	0.0	A	0.0	A	6.9	A	41.4	B	51.7	B
Sawmills and Wood Preservation	96.4	A	2.8	A	2.6	A	16.6	A	39.5	A	38.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	95.6	A	0.0	A	6.2	A	14.8	A	34.8	B	44.2	B
Other Wood Product Manufacturing	98.0	A	1.1	A	10.3	A	29.9	A	36.1	A	22.7	A
Paper Manufacturing	99.1	A	2.8	A	6.5	A	14.7	A	31.1	A	44.9	A
Printing and Related Support Activities	97.5	A	0.3	A	2.8	A	14.6	A	40.3	B	42.0	B
Petroleum and Coal Products Manufacturing	97.6	A	0.0	A	10.0	A	15.0	A	50.0	A	25.0	A
Chemical Manufacturing (excluding 3254)	99.1	A	1.5	A	4.0	A	17.4	A	44.1	A	32.9	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	1.9	A	7.5	A	20.2	A	37.6	B	32.9	B
Plastics and Rubber Products Manufacturing	98.5	A	2.5	A	4.8	A	16.3	A	37.1	A	39.4	A
Non-Metallic Mineral Products Manufacturing	94.6	A	2.3	A	5.7	A	21.9	A	33.2	A	36.9	A
Primary Metal Manufacturing	96.6	A	1.6	A	5.1	A	14.0	A	44.7	A	34.6	A
Fabricated Metal Product Manufacturing	97.7	A	2.1	A	8.4	A	22.6	A	30.7	A	36.2	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	97.5	A	0.6	A	4.0	A	16.7	A	48.4	A	30.4	A
Machinery Manufacturing (excluding 3331 & 3332)	98.2	A	0.7	A	4.3	A	14.8	A	41.2	B	39.0	B
Computer and Peripheral Equipment Manufacturing	97.7	A	0.0	A	0.0	A	5.4	A	35.5	B	59.1	B
Communications Equipment Manufacturing	100.0	A	0.0	A	1.7	A	21.0	A	39.2	B	38.2	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	0.0	A	2.3	A	15.5	A	43.7	B	38.6	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	98.1	A	0.0	A	2.9	A	11.3	A	42.1	B	43.7	B
Electrical Equipment, Appliance and Component Manufacturing	99.5	A	2.1	A	6.9	A	24.7	A	39.1	A	27.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	97.9	A	2.5	A	9.0	A	22.1	A	29.1	A	37.3	A
Aerospace Product and Parts Manufacturing	96.1	A	0.0	A	0.0	A	9.9	B	48.5	B	41.6	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	5.2	A	4.1	B	13.8	B	28.4	B	48.4	B
Furniture and Related Products Manufacturing	93.3	A	1.3	A	5.1	A	22.6	A	38.4	A	32.6	A
Miscellaneous Manufacturing	93.8	A	1.6	A	5.7	A	19.6	A	38.1	B	34.9	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Developing export markets												
Total Manufacturing Industries	95.6	A	7.6	A	9.8	A	17.4	A	28.9	A	36.3	A
Food Manufacturing	95.1	A	9.5	A	14.2	A	17.6	A	26.5	A	32.2	A
Beverage and Tobacco Product Manufacturing	96.9	A	15.7	A	11.3	A	24.5	A	17.9	A	30.6	A
Textile Mills	91.1	A	3.3	A	5.6	A	14.3	A	29.3	A	47.5	A
Textile Product Mills	95.1	A	3.9	A	9.1	B	21.5	B	23.8	B	41.7	B
Clothing Manufacturing	93.7	A	2.9	A	5.6	A	14.1	A	26.7	A	50.7	A
Leather and Allied Product Manufacturing	100.0	A	0.0	A	13.5	B	8.7	A	26.1	B	51.7	B
Sawmills and Wood Preservation	94.8	A	3.1	A	8.2	A	16.6	A	23.6	A	48.4	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.5	A	8.8	A	2.8	A	21.7	B	24.1	B	42.7	B
Other Wood Product Manufacturing	95.3	A	4.9	A	4.6	A	17.5	A	31.9	A	41.1	B
Paper Manufacturing	97.3	A	11.2	A	8.2	A	19.7	A	29.8	A	31.1	A
Printing and Related Support Activities	92.4	A	13.1	A	11.5	A	23.0	A	25.9	B	26.4	B
Petroleum and Coal Products Manufacturing	92.7	A	10.5	A	18.4	A	21.1	A	26.3	A	23.7	A
Chemical Manufacturing (excluding 3254)	95.9	A	12.1	A	11.6	A	25.3	A	24.5	A	26.4	A
Pharmaceutical and Medicine Manufacturing (3254)	94.4	A	11.5	A	18.0	B	12.7	A	22.5	A	35.4	B
Plastics and Rubber Products Manufacturing	98.2	A	5.1	A	8.9	A	17.7	A	35.1	A	33.2	A
Non-Metallic Mineral Products Manufacturing	87.3	A	18.7	A	13.9	A	17.7	A	19.6	A	30.0	A
Primary Metal Manufacturing	98.7	A	12.6	A	7.6	A	13.5	A	34.6	A	31.6	A
Fabricated Metal Product Manufacturing	95.3	A	8.6	A	10.4	A	16.3	A	28.6	A	36.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.8	A	0.6	A	6.4	A	10.4	A	36.2	A	46.4	A
Machinery Manufacturing (excluding 3331 & 3332)	97.6	A	3.2	A	8.2	A	18.4	A	33.5	A	36.8	B
Computer and Peripheral Equipment Manufacturing	97.7	A	9.5	A	8.5	B	15.7	B	18.3	B	48.0	B
Communications Equipment Manufacturing	100.0	A	4.3	A	3.3	A	18.2	B	33.6	B	40.6	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	97.7	A	0.0	A	4.5	A	23.7	B	33.4	B	38.4	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	97.2	A	5.8	A	1.9	A	16.8	A	21.0	B	54.5	B
Electrical Equipment, Appliance and Component Manufacturing	98.5	A	6.9	A	8.4	A	16.3	A	31.2	A	37.2	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	96.8	A	5.1	A	11.7	A	18.0	A	36.6	B	28.5	A
Aerospace Product and Parts Manufacturing	91.7	B	4.8	A	8.3	A	14.6	A	36.8	B	35.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	2.3	A	8.9	A	29.0	B	20.6	B	39.1	B
Furniture and Related Products Manufacturing	96.2	A	4.2	A	8.5	A	16.0	A	36.5	A	34.8	A
Miscellaneous Manufacturing	94.7	A	11.8	A	14.9	A	10.1	A	22.5	B	40.7	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Promoting firm or product (good or service) reputation												
Total Manufacturing Industries	99.0	A	0.8	A	2.7	A	11.8	A	31.9	A	52.7	A
Food Manufacturing	99.1	A	0.4	A	2.2	A	12.3	A	33.5	A	51.6	A
Beverage and Tobacco Product Manufacturing	100.0	A	0.0	A	0.0	A	9.0	A	32.0	A	59.1	A
Textile Mills	97.7	A	0.0	A	1.5	A	11.4	A	25.2	A	61.9	A
Textile Product Mills	100.0	A	0.0	A	0.9	A	14.6	A	31.8	B	52.7	B
Clothing Manufacturing	96.9	A	0.6	A	2.7	A	12.7	A	29.6	A	54.4	A
Leather and Allied Product Manufacturing	100.0	A	10.5	B	3.3	A	14.1	B	30.3	B	41.7	B
Sawmills and Wood Preservation	98.1	A	0.5	A	2.4	A	17.0	A	30.9	A	49.2	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.3	A	1.7	A	3.0	A	5.9	A	25.9	B	63.5	B
Other Wood Product Manufacturing	97.9	A	0.0	A	4.6	A	13.4	A	30.7	A	51.3	A
Paper Manufacturing	99.5	A	1.2	A	4.9	A	14.2	A	32.7	A	47.0	A
Printing and Related Support Activities	98.7	A	0.0	A	3.7	A	14.3	A	28.5	B	53.4	B
Petroleum and Coal Products Manufacturing	100.0	A	0.0	A	0.0	A	9.8	A	39.0	A	51.2	A
Chemical Manufacturing (excluding 3254)	99.6	A	0.7	A	3.8	A	13.0	A	37.2	A	45.3	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	5.0	A	2.1	A	17.5	A	35.4	B	40.0	B
Plastics and Rubber Products Manufacturing	99.3	A	0.7	A	3.7	A	11.9	A	30.8	A	52.9	A
Non-Metallic Mineral Products Manufacturing	98.9	A	0.6	A	1.2	A	14.7	A	25.3	A	58.2	A
Primary Metal Manufacturing	99.4	A	1.5	A	6.2	A	11.5	A	37.9	A	42.8	A
Fabricated Metal Product Manufacturing	99.8	A	0.6	A	2.3	A	10.5	A	33.6	A	53.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0	A	0.5	A	1.0	A	6.7	A	32.5	A	59.2	A
Machinery Manufacturing (excluding 3331 & 3332)	99.3	A	1.7	A	3.6	A	14.0	A	32.4	A	48.3	B
Computer and Peripheral Equipment Manufacturing	97.7	A	2.4	A	7.5	A	8.3	A	32.5	B	49.2	B
Communications Equipment Manufacturing	100.0	A	0.0	A	1.8	A	8.7	A	47.3	B	42.1	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	0.0	A	2.3	A	18.7	A	26.2	B	52.8	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	0.0	A	1.1	A	12.5	A	34.9	B	51.5	B
Electrical Equipment, Appliance and Component Manufacturing	100.0	A	1.1	A	3.3	A	7.2	A	42.2	A	46.4	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	99.5	A	0.0	A	2.2	A	11.6	A	24.9	A	61.3	B
Aerospace Product and Parts Manufacturing	100.0	A	1.9	A	5.1	A	5.3	A	34.5	B	53.2	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	0.0	A	0.0	A	14.5	B	40.3	B	45.2	B
Furniture and Related Products Manufacturing	96.7	A	1.9	A	1.4	A	8.0	A	35.9	A	52.8	A
Miscellaneous Manufacturing	98.4	A	1.5	A	1.5	A	6.9	A	22.1	A	68.0	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Providing after-hour client support services												
Total Manufacturing Industries	91.5	A	11.0	A	18.2	A	24.6	A	23.9	A	22.3	A
Food Manufacturing	90.6	A	10.3	A	19.7	A	24.9	A	27.8	A	17.3	A
Beverage and Tobacco Product Manufacturing	88.9	A	1.5	A	16.7	A	25.2	A	34.6	A	22.0	A
Textile Mills	93.3	A	11.3	A	13.7	A	27.1	A	33.1	A	14.9	A
Textile Product Mills	83.0	A	19.6	B	22.5	B	22.8	B	27.4	B	7.7	A
Clothing Manufacturing	82.5	A	23.1	A	21.1	A	24.2	A	20.7	A	10.9	A
Leather and Allied Product Manufacturing	96.4	A	20.6	B	44.5	B	13.1	B	10.9	B	10.9	A
Sawmills and Wood Preservation	78.7	A	18.0	A	18.9	A	30.2	A	15.7	A	17.1	A
Veneer, Plywood and Engineered Wood Product Manufacturing	88.8	A	20.1	B	15.3	A	33.1	B	20.0	B	11.6	A
Other Wood Product Manufacturing	86.7	A	14.2	A	17.3	A	23.6	A	24.2	A	20.7	A
Paper Manufacturing	95.6	A	12.9	A	15.4	A	25.0	A	28.8	A	17.9	A
Printing and Related Support Activities	96.5	A	6.1	A	17.4	A	23.0	A	17.8	A	35.7	B
Petroleum and Coal Products Manufacturing	95.1	A	2.6	A	17.9	A	33.3	A	33.3	A	12.8	A
Chemical Manufacturing (excluding 3254)	94.1	A	6.5	A	17.5	A	26.3	A	28.6	A	21.1	A
Pharmaceutical and Medicine Manufacturing (3254)	92.6	A	11.4	A	14.9	A	28.7	B	24.6	B	20.3	A
Plastics and Rubber Products Manufacturing	90.3	A	8.1	A	19.7	A	29.4	A	24.6	A	18.2	A
Non-Metallic Mineral Products Manufacturing	93.7	A	13.3	A	17.5	A	17.4	A	24.2	A	27.5	A
Primary Metal Manufacturing	91.7	A	14.9	A	26.3	A	25.0	A	17.7	A	16.1	A
Fabricated Metal Product Manufacturing	91.4	A	13.1	A	14.6	A	25.3	A	22.6	A	24.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.2	A	2.5	A	15.4	A	22.1	A	26.7	A	33.3	A
Machinery Manufacturing (excluding 3331 & 3332)	93.9	A	5.6	A	16.4	A	22.9	A	23.2	A	31.8	A
Computer and Peripheral Equipment Manufacturing	90.7	A	8.3	A	26.7	B	17.5	B	10.7	A	36.8	B
Communications Equipment Manufacturing	94.9	A	5.2	A	15.7	B	27.7	A	32.6	B	18.7	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	93.3	A	13.0	A	9.5	A	27.1	B	26.9	B	23.5	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	6.6	A	17.2	A	24.2	B	21.2	A	30.8	B
Electrical Equipment, Appliance and Component Manufacturing	96.6	A	7.3	A	23.1	A	25.3	A	24.9	A	19.4	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	91.2	A	7.9	A	16.2	A	20.6	A	27.7	B	27.5	B
Aerospace Product and Parts Manufacturing	85.5	B	6.6	A	11.0	A	25.7	B	33.3	B	23.4	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	98.3	A	6.7	B	19.2	B	18.3	B	22.8	B	33.0	B
Furniture and Related Products Manufacturing	87.0	A	13.8	A	23.5	A	22.2	A	27.3	A	13.2	A
Miscellaneous Manufacturing	93.6	A	15.9	A	17.6	A	26.3	B	17.1	A	23.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Hiring new graduates from universities												
Total Manufacturing Industries	93.6	A	18.1	A	25.2	A	32.4	A	18.6	A	5.8	A
Food Manufacturing	94.7	A	17.2	A	21.9	A	37.0	A	17.4	A	6.5	A
Beverage and Tobacco Product Manufacturing	94.2	A	18.5	A	12.5	A	39.8	A	19.9	A	9.2	A
Textile Mills	95.4	A	14.0	A	16.2	A	45.9	A	21.7	A	2.2	A
Textile Product Mills	88.5	A	36.3	B	16.6	B	34.2	B	12.9	A	0.0	A
Clothing Manufacturing	86.6	A	30.6	A	29.2	A	29.8	A	9.3	A	1.0	A
Leather and Allied Product Manufacturing	93.4	A	20.9	B	45.7	B	23.8	B	5.8	A	3.9	A
Sawmills and Wood Preservation	89.2	A	19.8	A	22.1	A	35.7	A	13.8	A	8.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	94.0	A	20.9	A	19.6	A	37.6	B	20.2	A	1.7	A
Other Wood Product Manufacturing	92.1	A	32.7	A	29.2	A	25.6	A	7.9	A	4.6	A
Paper Manufacturing	98.8	A	15.6	A	23.9	A	36.0	A	17.4	A	7.2	A
Printing and Related Support Activities	93.5	A	21.9	A	32.0	B	32.0	B	10.1	A	4.0	A
Petroleum and Coal Products Manufacturing	97.6	A	2.5	A	20.0	A	32.5	A	25.0	A	20.0	A
Chemical Manufacturing (excluding 3254)	97.8	A	8.4	A	23.6	A	34.7	A	26.1	A	7.2	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	3.7	A	30.1	A	37.3	B	23.0	B	5.8	A
Plastics and Rubber Products Manufacturing	93.7	A	18.7	A	24.5	A	30.5	A	16.8	A	9.4	A
Non-Metallic Mineral Products Manufacturing	93.3	A	25.4	A	24.4	A	22.0	A	19.3	A	9.0	A
Primary Metal Manufacturing	96.7	A	19.2	A	19.4	A	28.4	A	22.5	A	10.5	A
Fabricated Metal Product Manufacturing	91.5	A	17.1	A	27.5	A	35.2	A	17.5	A	2.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.3	A	13.9	A	20.9	A	39.1	A	19.4	A	6.7	A
Machinery Manufacturing (excluding 3331 & 3332)	93.5	A	13.5	A	24.3	A	34.3	B	22.8	A	5.2	A
Computer and Peripheral Equipment Manufacturing	97.7	A	15.5	A	28.8	B	10.7	B	19.6	A	25.4	B
Communications Equipment Manufacturing	98.3	A	5.5	A	17.0	B	19.4	A	51.4	B	6.7	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	11.0	A	25.1	A	23.0	B	21.0	B	19.9	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	97.1	A	6.9	A	18.7	A	24.8	B	34.5	B	15.2	A
Electrical Equipment, Appliance and Component Manufacturing	97.6	A	11.7	A	22.9	A	32.7	A	25.0	A	7.8	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.4	A	15.4	A	20.0	A	28.9	B	32.2	B	3.5	A
Aerospace Product and Parts Manufacturing	95.6	A	14.2	A	25.7	B	30.4	B	22.2	B	7.6	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	98.3	A	18.6	B	33.2	B	28.2	B	18.2	B	1.8	A
Furniture and Related Products Manufacturing	88.5	A	15.4	A	38.7	A	29.1	A	13.1	A	3.7	A
Miscellaneous Manufacturing	91.9	A	26.2	A	21.6	A	29.6	B	18.4	A	4.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Hiring new graduates from technical schools and colleges												
Total Manufacturing Industries	96.1	A	8.8	A	18.1	A	30.5	A	30.8	A	11.8	A
Food Manufacturing	94.5	A	11.7	A	20.7	A	32.9	A	26.0	A	8.7	A
Beverage and Tobacco Product Manufacturing	94.4	A	10.2	A	11.4	A	35.7	A	36.6	A	6.2	A
Textile Mills	96.9	A	10.6	A	13.7	A	27.0	A	32.6	A	16.1	A
Textile Product Mills	91.6	A	22.2	B	28.2	B	28.8	B	18.8	B	2.0	A
Clothing Manufacturing	90.1	A	17.6	A	22.4	A	37.1	A	16.3	A	6.6	A
Leather and Allied Product Manufacturing	93.4	A	16.7	B	35.0	B	21.9	B	11.6	B	14.8	B
Sawmills and Wood Preservation	96.1	A	7.2	A	14.3	A	34.4	A	33.1	A	10.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing	97.3	A	5.1	A	13.7	A	36.5	B	43.1	B	1.7	A
Other Wood Product Manufacturing	95.0	A	16.1	A	24.3	A	32.9	A	19.7	A	7.0	A
Paper Manufacturing	99.3	A	9.0	A	17.7	A	33.0	A	30.3	A	10.0	A
Printing and Related Support Activities	97.5	A	6.6	A	21.7	A	29.8	B	28.7	A	13.2	A
Petroleum and Coal Products Manufacturing	100.0	A	2.4	A	7.3	A	46.3	A	31.7	A	12.2	A
Chemical Manufacturing (excluding 3254)	98.4	A	6.4	A	20.3	A	33.0	A	31.8	A	8.5	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	7.1	A	30.3	A	27.8	B	26.0	A	8.7	A
Plastics and Rubber Products Manufacturing	96.4	A	9.6	A	14.8	A	30.0	A	32.7	A	12.9	A
Non-Metallic Mineral Products Manufacturing	95.1	A	17.7	A	19.4	A	27.5	A	22.7	A	12.7	A
Primary Metal Manufacturing	97.3	A	8.0	A	18.4	A	27.9	A	32.4	A	13.3	A
Fabricated Metal Product Manufacturing	95.7	A	7.0	A	15.7	A	33.3	A	31.0	A	13.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0	A	1.2	A	18.2	A	36.8	A	31.6	A	12.2	A
Machinery Manufacturing (excluding 3331 & 3332)	96.1	A	4.5	A	9.8	A	26.6	A	40.2	B	18.9	A
Computer and Peripheral Equipment Manufacturing	100.0	A	12.0	A	23.8	B	17.1	B	17.2	B	29.8	B
Communications Equipment Manufacturing	100.0	A	5.4	A	7.1	A	22.0	B	55.6	B	9.9	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	6.6	A	21.0	A	24.3	A	31.7	B	16.4	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	4.0	A	14.2	A	26.7	B	41.6	B	13.5	A
Electrical Equipment, Appliance and Component Manufacturing	100.0	A	4.0	A	18.8	A	33.8	A	31.9	A	11.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.8	A	8.7	A	10.7	A	24.6	A	44.1	B	11.9	A
Aerospace Product and Parts Manufacturing	95.6	A	0.0	A	14.2	B	23.3	B	40.4	B	22.1	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	98.3	A	8.9	A	21.0	B	27.7	B	27.5	B	15.0	B
Furniture and Related Products Manufacturing	91.5	A	7.4	A	23.1	A	29.1	A	30.9	A	9.5	A
Miscellaneous Manufacturing	95.8	A	9.8	A	21.3	A	20.8	A	33.5	B	14.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Hiring experienced employees												
Total Manufacturing Industries	98.9	A	1.9	A	6.8	A	20.1	A	44.4	A	26.8	A
Food Manufacturing	98.8	A	1.4	A	7.2	A	24.0	A	46.2	A	21.2	A
Beverage and Tobacco Product Manufacturing	98.2	A	5.3	A	11.6	A	21.0	A	40.5	A	21.6	A
Textile Mills	98.4	A	2.2	A	8.4	A	17.7	A	46.6	A	25.1	A
Textile Product Mills	99.1	A	3.6	A	8.5	B	16.9	B	50.3	B	20.7	B
Clothing Manufacturing	97.8	A	2.6	A	2.1	A	17.3	A	45.5	A	32.5	A
Leather and Allied Product Manufacturing	100.0	A	5.1	A	15.6	B	15.3	B	41.1	B	22.8	B
Sawmills and Wood Preservation	99.5	A	0.6	A	2.9	A	14.7	A	54.6	A	27.2	A
Veneer, Plywood and Engineered Wood Product Manufacturing	97.3	A	1.7	A	6.4	A	23.5	B	51.6	B	16.8	A
Other Wood Product Manufacturing	100.0	A	2.2	A	8.5	A	26.3	A	38.4	A	24.6	A
Paper Manufacturing	99.5	A	2.8	A	6.9	A	31.9	A	41.9	A	16.5	A
Printing and Related Support Activities	99.5	A	0.8	A	3.8	A	14.3	A	42.7	B	38.4	B
Petroleum and Coal Products Manufacturing	97.6	A	0.0	A	7.5	A	40.0	A	30.0	A	22.5	A
Chemical Manufacturing (excluding 3254)	98.7	A	2.4	A	12.6	A	21.8	A	47.2	A	16.0	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	0.0	A	3.7	A	17.5	A	58.7	B	20.1	A
Plastics and Rubber Products Manufacturing	98.6	A	2.9	A	9.3	A	19.7	A	43.2	A	24.9	A
Non-Metallic Mineral Products Manufacturing	98.7	A	3.7	A	11.5	A	23.7	A	35.2	A	25.9	A
Primary Metal Manufacturing	99.4	A	2.2	A	8.0	A	26.3	A	45.3	A	18.3	A
Fabricated Metal Product Manufacturing	99.2	A	1.0	A	5.9	A	21.1	A	41.2	A	30.8	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0	A	0.0	A	3.6	A	14.8	A	55.3	A	26.3	A
Machinery Manufacturing (excluding 3331 & 3332)	99.0	A	2.7	A	3.8	A	16.0	A	46.1	B	31.3	A
Computer and Peripheral Equipment Manufacturing	100.0	A	2.3	A	2.3	A	10.9	B	47.1	B	37.4	B
Communications Equipment Manufacturing	100.0	A	1.7	A	1.7	A	29.0	B	55.7	B	12.0	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	2.2	A	2.2	A	10.9	A	41.4	B	43.4	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	0.0	A	4.9	A	20.8	B	46.0	B	28.3	B
Electrical Equipment, Appliance and Component Manufacturing	98.0	A	1.6	A	7.3	A	30.6	A	40.0	A	20.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	100.0	A	1.4	A	7.8	A	23.0	A	42.8	B	25.0	A
Aerospace Product and Parts Manufacturing	100.0	A	0.0	A	4.4	A	15.5	B	31.7	B	48.3	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	0.0	A	13.3	B	18.3	B	33.3	B	35.0	B
Furniture and Related Products Manufacturing	96.1	A	2.1	A	5.0	A	17.3	A	49.8	A	25.8	A
Miscellaneous Manufacturing	99.1	A	2.2	A	13.0	A	12.4	A	40.6	B	31.9	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Recruiting skilled people from outside of Canada												
Total Manufacturing Industries	84.3	A	47.9	A	26.7	A	14.9	A	6.6	A	3.8	A
Food Manufacturing	83.8	A	54.1	A	23.1	A	14.6	A	6.4	A	1.8	A
Beverage and Tobacco Product Manufacturing	82.6	A	43.0	B	30.3	A	13.9	A	5.3	A	7.5	A
Textile Mills	87.9	A	44.0	A	19.5	A	17.6	A	12.9	A	6.1	A
Textile Product Mills	87.0	A	54.9	B	27.2	B	13.1	B	1.1	A	3.8	A
Clothing Manufacturing	76.6	A	42.3	A	18.4	A	20.0	A	11.7	A	7.5	A
Leather and Allied Product Manufacturing	89.8	B	40.5	B	13.7	B	11.7	B	19.4	B	14.7	B
Sawmills and Wood Preservation	75.9	A	57.6	A	33.5	A	6.2	A	1.0	A	1.7	A
Veneer, Plywood and Engineered Wood Product Manufacturing	73.3	B	50.0	B	29.9	B	17.8	B	2.3	A	0.0	A
Other Wood Product Manufacturing	81.5	A	60.5	B	20.9	A	9.6	A	7.0	A	1.9	A
Paper Manufacturing	88.9	A	57.5	A	31.2	A	9.9	A	1.0	A	0.5	A
Printing and Related Support Activities	83.4	A	61.3	B	24.2	B	9.5	A	2.0	A	2.9	A
Petroleum and Coal Products Manufacturing	82.9	A	50.0	A	29.4	A	20.6	A	0.0	A	0.0	A
Chemical Manufacturing (excluding 3254)	88.1	A	50.5	A	31.9	A	12.7	A	4.2	A	0.8	A
Pharmaceutical and Medicine Manufacturing (3254)	92.9	A	37.6	B	26.5	B	21.7	A	14.2	A	0.0	A
Plastics and Rubber Products Manufacturing	86.7	A	49.6	A	27.5	A	15.1	A	5.9	A	1.9	A
Non-Metallic Mineral Products Manufacturing	75.9	A	59.5	B	20.3	A	7.7	A	7.2	A	5.4	A
Primary Metal Manufacturing	89.0	A	47.7	A	27.1	A	15.9	A	6.2	A	3.2	A
Fabricated Metal Product Manufacturing	81.8	A	46.1	B	27.5	A	16.7	A	4.3	A	5.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	88.9	A	42.1	A	29.0	A	19.8	A	5.4	A	3.6	A
Machinery Manufacturing (excluding 3331 & 3332)	86.3	A	34.8	B	33.9	B	19.7	A	8.2	A	3.5	A
Computer and Peripheral Equipment Manufacturing	97.7	A	31.0	B	29.4	B	19.8	B	7.9	B	11.9	A
Communications Equipment Manufacturing	94.9	A	31.0	B	42.2	B	14.1	A	10.9	A	1.7	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	95.6	A	33.2	B	13.8	A	23.9	B	14.1	A	15.0	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	89.2	A	29.3	B	33.5	A	16.8	A	10.6	A	9.8	A
Electrical Equipment, Appliance and Component Manufacturing	95.1	A	47.7	A	27.7	A	12.3	A	7.8	A	4.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	92.2	A	38.0	A	31.4	B	17.3	A	10.0	A	3.3	A
Aerospace Product and Parts Manufacturing	90.5	B	30.8	B	19.9	B	29.6	B	12.0	B	7.7	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	86.7	A	58.9	B	24.0	B	4.3	B	10.8	A	2.0	A
Furniture and Related Products Manufacturing	76.6	A	47.2	B	24.0	A	18.9	A	7.6	A	2.3	A
Miscellaneous Manufacturing	83.6	A	47.2	B	24.9	B	11.2	A	10.2	A	6.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Training employees												
Total Manufacturing Industries	99.4	A	0.6	A	2.7	A	14.3	A	41.0	A	41.4	A
Food Manufacturing	99.4	A	0.6	A	1.2	A	13.2	A	39.0	A	46.0	A
Beverage and Tobacco Product Manufacturing	100.0	A	4.6	A	1.5	A	7.8	A	42.5	A	43.5	A
Textile Mills	97.7	A	0.0	A	0.8	A	7.0	A	38.1	A	54.2	A
Textile Product Mills	98.2	A	0.0	A	5.4	A	15.0	B	50.2	B	29.4	B
Clothing Manufacturing	97.8	A	0.7	A	6.6	A	27.1	A	38.8	A	26.9	A
Leather and Allied Product Manufacturing	100.0	A	0.0	A	6.9	A	17.4	B	37.5	B	38.1	B
Sawmills and Wood Preservation	100.0	A	0.5	A	2.1	A	14.0	A	33.5	A	50.0	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	0.0	A	1.7	A	10.4	A	42.2	B	45.8	B
Other Wood Product Manufacturing	100.0	A	2.7	A	4.1	A	17.8	A	41.1	A	34.3	A
Paper Manufacturing	100.0	A	0.0	A	1.6	A	9.8	A	38.4	A	50.1	A
Printing and Related Support Activities	99.2	A	0.8	A	3.9	A	11.6	A	39.1	B	44.6	B
Petroleum and Coal Products Manufacturing	100.0	A	0.0	A	4.9	A	2.4	A	43.9	A	48.8	A
Chemical Manufacturing (excluding 3254)	100.0	A	0.6	A	1.7	A	13.0	A	39.0	A	45.8	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	0.0	A	0.0	A	15.1	A	36.4	B	48.5	B
Plastics and Rubber Products Manufacturing	99.8	A	0.8	A	3.7	A	11.7	A	34.3	A	49.4	A
Non-Metallic Mineral Products Manufacturing	100.0	A	0.0	A	4.5	A	15.4	A	35.8	A	44.3	A
Primary Metal Manufacturing	100.0	A	0.9	A	0.6	A	10.2	A	41.9	A	46.4	A
Fabricated Metal Product Manufacturing	99.7	A	0.4	A	3.3	A	16.7	A	44.8	A	34.8	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0	A	0.0	A	2.3	A	19.6	A	44.0	A	34.1	A
Machinery Manufacturing (excluding 3331 & 3332)	100.0	A	0.7	A	1.2	A	15.1	A	44.8	B	38.3	A
Computer and Peripheral Equipment Manufacturing	100.0	A	0.0	A	0.0	A	17.4	A	35.5	B	47.1	B
Communications Equipment Manufacturing	100.0	A	0.0	A	3.3	A	13.0	A	55.1	B	28.6	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	0.0	A	0.0	A	12.1	A	59.1	B	28.8	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	0.0	A	0.0	A	14.4	A	38.8	A	46.8	B
Electrical Equipment, Appliance and Component Manufacturing	98.0	A	0.0	A	4.3	A	14.8	A	44.1	A	36.9	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	100.0	A	0.7	A	1.6	A	10.4	A	38.5	B	48.7	B
Aerospace Product and Parts Manufacturing	100.0	A	0.0	A	0.0	A	13.4	B	34.5	B	52.1	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	0.0	A	0.0	A	14.0	A	37.4	B	48.5	B
Furniture and Related Products Manufacturing	97.3	A	1.5	A	1.1	A	16.1	A	45.9	A	35.4	A
Miscellaneous Manufacturing	99.1	A	1.1	A	4.9	A	9.0	A	44.0	B	41.1	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Using teams within your firm which bring together people with different skills												
Total Manufacturing Industries	94.0	A	4.7	A	9.0	A	24.9	A	35.0	A	26.4	A
Food Manufacturing	95.6	A	4.3	A	9.9	A	22.9	A	37.0	A	25.8	A
Beverage and Tobacco Product Manufacturing	95.9	A	9.4	A	3.1	A	18.9	A	40.0	A	28.6	A
Textile Mills	91.2	A	5.1	A	7.3	A	25.9	A	32.7	A	29.0	A
Textile Product Mills	98.2	A	7.0	A	20.6	B	22.1	B	32.2	B	18.2	B
Clothing Manufacturing	84.4	A	6.0	A	13.8	A	30.2	A	32.5	A	17.6	A
Leather and Allied Product Manufacturing	93.1	A	3.9	A	17.4	B	23.5	B	29.4	B	25.8	B
Sawmills and Wood Preservation	91.2	A	6.6	A	13.3	A	21.2	A	34.6	A	24.3	A
Veneer, Plywood and Engineered Wood Product Manufacturing	89.7	A	0.0	A	16.7	A	25.4	B	24.5	B	33.4	B
Other Wood Product Manufacturing	93.9	A	11.1	A	12.5	A	30.3	A	30.4	A	15.8	A
Paper Manufacturing	99.1	A	3.3	A	7.7	A	21.9	A	42.1	A	25.0	A
Printing and Related Support Activities	93.9	A	7.1	A	5.6	A	26.6	B	31.0	B	29.6	B
Petroleum and Coal Products Manufacturing	100.0	A	2.4	A	7.3	A	14.6	A	36.6	A	39.0	A
Chemical Manufacturing (excluding 3254)	96.1	A	5.8	A	3.6	A	21.1	A	38.0	A	31.4	A
Pharmaceutical and Medicine Manufacturing (3254)	92.6	A	2.0	A	2.0	A	22.0	A	38.8	B	35.2	B
Plastics and Rubber Products Manufacturing	96.1	A	3.7	A	10.0	A	17.1	A	38.4	A	30.7	A
Non-Metallic Mineral Products Manufacturing	92.1	A	8.4	A	14.8	A	23.4	A	26.3	A	27.2	A
Primary Metal Manufacturing	97.2	A	2.2	A	5.3	A	22.0	A	36.5	A	33.9	A
Fabricated Metal Product Manufacturing	94.0	A	2.5	A	9.0	A	33.2	A	35.3	A	20.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	96.2	A	4.8	A	10.4	A	24.9	A	40.5	A	19.4	A
Machinery Manufacturing (excluding 3331 & 3332)	96.2	A	3.3	A	10.7	A	24.2	A	36.1	B	25.6	A
Computer and Peripheral Equipment Manufacturing	100.0	A	8.1	A	9.3	A	22.7	B	26.0	B	33.9	B
Communications Equipment Manufacturing	96.6	A	0.0	A	1.7	A	46.8	B	27.5	B	24.0	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	97.8	A	2.2	A	7.8	A	13.6	A	55.6	B	20.7	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	96.1	A	4.8	A	9.1	A	15.9	A	33.5	B	36.7	B
Electrical Equipment, Appliance and Component Manufacturing	95.6	A	2.8	A	8.0	A	26.0	A	31.8	A	31.4	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.2	A	3.9	A	2.2	A	23.6	A	34.2	B	36.2	B
Aerospace Product and Parts Manufacturing	100.0	A	8.2	A	1.9	A	12.6	B	39.4	B	37.7	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	86.1	A	4.7	A	0.0	A	18.7	B	39.2	B	37.3	B
Furniture and Related Products Manufacturing	86.2	A	6.4	A	9.4	A	30.8	A	28.9	A	24.4	A
Miscellaneous Manufacturing	92.6	A	3.9	A	7.4	A	20.9	B	38.7	B	29.2	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Performing research and development within your firm												
Total Manufacturing Industries	95.2	A	5.3	A	12.0	A	20.7	A	30.3	A	31.7	A
Food Manufacturing	96.3	A	4.5	A	11.2	A	17.4	A	33.0	A	34.0	A
Beverage and Tobacco Product Manufacturing	98.6	A	8.0	A	16.5	A	20.7	A	26.4	A	28.4	A
Textile Mills	98.4	A	2.5	A	2.2	A	20.4	A	23.1	A	51.8	A
Textile Product Mills	98.1	A	3.4	A	20.0	B	14.3	A	37.1	B	25.2	B
Clothing Manufacturing	90.2	A	7.4	A	11.2	A	24.7	A	31.2	A	25.6	A
Leather and Allied Product Manufacturing	100.0	A	1.8	A	0.0	A	29.7	B	19.2	B	49.2	B
Sawmills and Wood Preservation	91.5	A	11.8	A	15.9	A	26.5	A	26.5	A	19.3	A
Veneer, Plywood and Engineered Wood Product Manufacturing	92.5	A	3.6	A	14.7	A	23.1	B	34.6	B	23.9	B
Other Wood Product Manufacturing	97.5	A	3.5	A	22.3	A	29.8	A	28.0	A	16.3	A
Paper Manufacturing	97.9	A	7.7	A	15.9	A	25.2	A	32.3	A	18.9	A
Printing and Related Support Activities	92.2	A	12.3	A	17.3	A	22.7	A	32.4	B	15.3	A
Petroleum and Coal Products Manufacturing	100.0	A	7.3	A	17.1	A	12.2	A	31.7	A	31.7	A
Chemical Manufacturing (excluding 3254)	98.2	A	1.6	A	11.6	A	16.8	A	26.8	A	43.1	A
Pharmaceutical and Medicine Manufacturing (3254)	98.1	A	1.9	A	7.2	A	15.6	A	22.7	A	52.6	B
Plastics and Rubber Products Manufacturing	96.8	A	2.3	A	7.5	A	17.6	A	30.5	A	42.0	A
Non-Metallic Mineral Products Manufacturing	93.8	A	6.0	A	12.5	A	28.2	A	31.1	A	22.3	A
Primary Metal Manufacturing	96.9	A	2.1	A	11.5	A	21.3	A	45.4	A	19.6	A
Fabricated Metal Product Manufacturing	91.7	A	8.7	A	16.1	A	23.6	A	26.6	A	25.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.0	A	1.0	A	6.8	A	14.8	A	25.1	A	52.3	A
Machinery Manufacturing (excluding 3331 & 3332)	97.8	A	0.7	A	9.5	A	17.5	A	39.9	B	32.4	A
Computer and Peripheral Equipment Manufacturing	100.0	A	13.4	B	4.7	A	10.3	B	17.8	B	53.9	B
Communications Equipment Manufacturing	100.0	A	1.7	A	10.2	A	3.9	A	24.3	B	59.9	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	89.2	A	0.0	A	7.7	A	9.9	A	24.8	B	57.5	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	98.2	A	1.9	A	3.7	A	19.0	B	25.0	A	50.4	B
Electrical Equipment, Appliance and Component Manufacturing	95.1	A	3.0	A	12.1	A	17.4	A	33.6	A	34.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	93.7	A	6.2	A	8.2	A	11.7	A	35.0	B	38.9	B
Aerospace Product and Parts Manufacturing	96.8	A	6.6	A	13.8	B	17.0	A	27.6	B	35.1	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	3.5	B	14.6	B	23.3	B	23.5	B	35.2	B
Furniture and Related Products Manufacturing	91.7	A	2.8	A	10.6	A	27.9	A	32.8	A	25.9	A
Miscellaneous Manufacturing	96.8	A	8.7	A	10.3	A	20.5	A	20.3	A	40.2	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Involvement in collaboration and cooperation with other firms												
Total Manufacturing Industries	92.5	A	13.4	A	20.4	A	30.3	A	25.3	A	10.7	A
Food Manufacturing	94.1	A	12.5	A	21.9	A	31.2	A	22.1	A	12.4	A
Beverage and Tobacco Product Manufacturing	94.4	A	16.6	A	19.4	A	41.3	A	16.6	A	6.1	A
Textile Mills	96.2	A	7.6	A	20.2	A	33.0	A	28.7	A	10.5	A
Textile Product Mills	96.7	A	14.4	B	18.1	B	46.0	B	15.3	B	6.2	A
Clothing Manufacturing	80.4	A	17.4	A	24.2	A	30.9	A	19.7	A	7.9	A
Leather and Allied Product Manufacturing	91.3	A	16.8	A	24.3	B	26.3	B	26.6	B	5.9	A
Sawmills and Wood Preservation	90.5	A	21.4	A	15.1	A	28.4	A	28.1	A	7.1	A
Veneer, Plywood and Engineered Wood Product Manufacturing	81.9	A	7.7	A	9.1	A	41.1	B	34.9	B	7.2	A
Other Wood Product Manufacturing	92.3	A	15.0	A	26.3	A	33.8	A	20.5	A	4.3	A
Paper Manufacturing	93.0	A	16.9	A	15.4	A	38.5	A	24.3	A	5.0	A
Printing and Related Support Activities	93.3	A	17.2	A	20.8	A	28.8	B	20.8	A	12.4	A
Petroleum and Coal Products Manufacturing	100.0	A	2.4	A	12.2	A	36.6	A	31.7	A	17.1	A
Chemical Manufacturing (excluding 3254)	92.6	A	10.7	A	19.1	A	27.7	A	34.1	A	8.4	A
Pharmaceutical and Medicine Manufacturing (3254)	87.9	A	7.8	A	17.4	A	22.6	A	34.3	B	17.8	A
Plastics and Rubber Products Manufacturing	93.7	A	14.2	A	17.6	A	28.5	A	23.0	A	16.7	A
Non-Metallic Mineral Products Manufacturing	91.0	A	19.0	A	18.9	A	30.1	A	23.5	A	8.5	A
Primary Metal Manufacturing	92.7	A	18.0	A	22.1	A	24.9	A	24.6	A	10.4	A
Fabricated Metal Product Manufacturing	92.6	A	15.0	A	20.0	A	34.6	A	19.5	A	10.9	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	96.6	A	9.1	A	15.6	A	26.8	A	35.6	A	13.0	A
Machinery Manufacturing (excluding 3331 & 3332)	96.5	A	7.2	A	19.7	A	32.0	A	30.4	A	10.7	A
Computer and Peripheral Equipment Manufacturing	97.1	A	13.0	B	13.2	A	10.4	B	46.7	B	16.8	A
Communications Equipment Manufacturing	98.2	A	3.4	A	19.7	A	29.3	B	29.3	B	18.4	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	95.7	A	13.9	A	20.4	A	25.6	A	26.1	B	14.0	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	98.0	A	3.9	A	23.1	B	13.5	A	39.0	B	20.5	A
Electrical Equipment, Appliance and Component Manufacturing	95.4	A	8.5	A	25.9	A	23.2	A	29.7	A	12.7	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	92.5	A	11.9	A	24.8	A	29.6	B	27.3	A	6.5	A
Aerospace Product and Parts Manufacturing	92.7	A	2.6	A	23.9	B	26.1	B	30.2	B	17.2	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	87.8	A	4.0	A	22.2	B	39.9	B	23.4	B	10.6	B
Furniture and Related Products Manufacturing	86.2	A	18.2	A	24.8	A	25.6	A	22.6	A	8.8	A
Miscellaneous Manufacturing	94.3	A	12.7	A	18.2	A	27.8	B	30.5	B	10.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Developing new products (goods or services) and processes												
Total Manufacturing Industries	97.0	A	2.3	A	6.5	A	16.7	A	36.2	A	38.2	A
Food Manufacturing	97.3	A	1.2	A	3.9	A	17.2	A	36.7	A	41.0	A
Beverage and Tobacco Product Manufacturing	97.1	A	8.0	A	5.8	A	20.7	A	38.3	A	27.2	A
Textile Mills	98.4	A	1.5	A	3.1	A	10.9	A	28.6	A	56.0	A
Textile Product Mills	98.1	A	0.0	A	2.5	A	13.1	B	41.4	B	43.0	B
Clothing Manufacturing	96.4	A	1.6	A	5.2	A	12.9	A	34.6	A	45.6	A
Leather and Allied Product Manufacturing	98.2	A	0.0	A	0.0	A	3.7	A	47.7	B	48.6	B
Sawmills and Wood Preservation	95.8	A	2.9	A	7.2	A	23.4	A	44.1	A	22.4	A
Veneer, Plywood and Engineered Wood Product Manufacturing	88.4	A	0.0	A	1.8	A	31.0	B	34.0	B	33.1	B
Other Wood Product Manufacturing	98.4	A	5.1	A	14.3	A	28.5	A	28.3	A	23.7	A
Paper Manufacturing	98.6	A	7.8	A	7.9	A	22.4	A	33.7	A	28.2	A
Printing and Related Support Activities	97.5	A	3.0	A	13.0	A	21.6	A	33.3	B	29.1	B
Petroleum and Coal Products Manufacturing	92.7	A	2.6	A	10.5	A	15.8	A	44.7	A	26.3	A
Chemical Manufacturing (excluding 3254)	98.7	A	1.2	A	3.8	A	12.7	A	39.0	A	43.4	A
Pharmaceutical and Medicine Manufacturing (3254)	92.1	A	2.0	A	2.3	A	2.0	A	36.5	B	57.1	B
Plastics and Rubber Products Manufacturing	98.5	A	0.0	A	4.5	A	11.4	A	37.0	A	47.2	A
Non-Metallic Mineral Products Manufacturing	97.3	A	1.5	A	8.5	A	23.4	A	26.6	A	40.1	A
Primary Metal Manufacturing	96.3	A	4.1	A	7.4	A	26.2	A	36.6	A	25.7	A
Fabricated Metal Product Manufacturing	95.3	A	5.2	A	9.1	A	21.5	A	36.2	A	28.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	99.5	A	0.0	A	3.9	A	11.2	A	33.5	A	51.3	A
Machinery Manufacturing (excluding 3331 & 3332)	96.3	A	1.2	A	5.6	A	13.9	A	39.9	B	39.4	B
Computer and Peripheral Equipment Manufacturing	100.0	A	2.3	A	8.1	A	4.7	A	30.6	B	54.3	B
Communications Equipment Manufacturing	98.3	A	0.0	A	3.4	A	7.8	A	23.7	A	65.1	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	95.7	A	0.0	A	4.8	A	11.2	A	39.0	B	44.9	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	3.9	A	6.6	A	9.9	A	25.0	A	54.7	B
Electrical Equipment, Appliance and Component Manufacturing	98.5	A	0.0	A	6.9	A	14.5	A	39.9	A	38.7	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	95.1	A	2.8	A	8.6	A	12.6	A	37.6	B	38.5	B
Aerospace Product and Parts Manufacturing	94.4	A	2.1	A	10.1	B	17.0	B	41.1	B	29.7	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	98.3	A	0.0	A	3.8	A	12.0	B	46.1	B	38.0	B
Furniture and Related Products Manufacturing	96.3	A	1.2	A	4.9	A	16.0	A	41.9	A	36.0	A
Miscellaneous Manufacturing	98.3	A	1.9	A	3.0	A	10.0	A	36.4	B	48.7	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.2
Firm Success Factors
Factor by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Active involvement in developing new industry-wide standards												
Total Manufacturing Industries	92.5	A	12.8	A	20.9	A	29.4	A	24.2	A	12.7	A
Food Manufacturing	95.7	A	9.2	A	14.3	A	31.2	A	27.9	A	17.3	A
Beverage and Tobacco Product Manufacturing	97.0	A	6.0	A	30.7	A	21.7	A	28.2	A	13.4	A
Textile Mills	94.7	A	9.3	A	19.4	A	36.3	A	19.5	A	15.6	A
Textile Product Mills	90.8	A	13.7	B	28.6	B	22.4	B	29.1	B	6.2	A
Clothing Manufacturing	81.7	A	11.9	A	18.6	A	35.0	A	20.0	A	14.4	A
Leather and Allied Product Manufacturing	91.0	B	9.9	A	36.3	B	20.5	B	14.5	B	18.8	B
Sawmills and Wood Preservation	90.1	A	10.4	A	19.0	A	30.9	A	26.6	A	13.2	A
Veneer, Plywood and Engineered Wood Product Manufacturing	88.2	A	5.3	A	14.1	B	33.3	B	28.4	B	18.8	B
Other Wood Product Manufacturing	88.5	A	22.9	A	22.5	A	19.4	A	26.5	A	8.7	A
Paper Manufacturing	96.3	A	15.8	A	24.3	A	34.5	A	16.9	A	8.5	A
Printing and Related Support Activities	94.1	A	18.0	A	23.9	A	35.8	B	13.6	A	8.8	A
Petroleum and Coal Products Manufacturing	100.0	A	4.9	A	7.3	A	34.1	A	41.5	A	12.2	A
Chemical Manufacturing (excluding 3254)	95.0	A	6.4	A	19.8	A	30.7	A	29.5	A	13.7	A
Pharmaceutical and Medicine Manufacturing (3254)	91.3	A	13.3	A	27.2	B	21.3	A	26.7	A	11.5	A
Plastics and Rubber Products Manufacturing	94.4	A	13.0	A	22.6	A	30.4	A	21.4	A	12.5	A
Non-Metallic Mineral Products Manufacturing	96.0	A	19.4	A	14.1	A	23.2	A	27.6	A	15.7	A
Primary Metal Manufacturing	90.2	A	18.1	A	16.4	A	28.4	A	28.0	A	9.2	A
Fabricated Metal Product Manufacturing	92.3	A	17.0	A	17.0	A	32.2	A	23.2	A	10.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	93.8	A	14.7	A	28.9	A	26.8	A	21.5	A	8.2	A
Machinery Manufacturing (excluding 3331 & 3332)	93.9	A	9.0	A	25.1	A	30.3	A	24.8	A	10.8	A
Computer and Peripheral Equipment Manufacturing	97.3	A	16.1	B	19.5	B	20.3	B	17.7	B	26.3	A
Communications Equipment Manufacturing	96.7	A	8.7	A	23.5	B	25.9	A	31.1	B	10.8	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	90.3	A	18.2	A	21.9	B	23.2	B	24.6	A	12.2	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	97.9	A	7.6	A	21.5	A	25.4	B	26.5	B	19.1	A
Electrical Equipment, Appliance and Component Manufacturing	95.0	A	5.2	A	18.6	A	31.3	A	30.8	A	14.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	93.4	A	12.8	A	21.9	A	24.7	A	23.8	A	16.7	A
Aerospace Product and Parts Manufacturing	95.6	A	5.6	A	39.7	B	16.8	B	15.4	B	22.6	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	95.4	A	9.7	B	25.7	B	24.3	B	23.5	B	16.8	B
Furniture and Related Products Manufacturing	83.0	A	14.0	A	28.5	A	27.0	A	18.2	A	12.3	A
Miscellaneous Manufacturing	91.3	A	11.0	A	18.4	A	23.0	B	36.8	B	10.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries												
Seeking new markets	97.7	A	2.3	A	5.7	A	17.0	A	34.6	A	40.5	A
Satisfying existing clients	99.1	A	0.3	A	0.4	A	2.3	A	17.1	A	79.9	A
Developing niche or specialized markets	95.4	A	1.9	A	6.6	A	20.2	A	35.8	A	35.5	A
Developing export markets	93.9	A	9.0	A	10.6	A	18.1	A	27.8	A	34.5	A
Promoting firm or product (good or service) reputation	98.3	A	0.9	A	3.2	A	12.5	A	31.7	A	51.8	A
Providing after-hour client support services	90.3	A	12.2	A	18.9	A	24.7	A	22.7	A	21.4	A
Hiring new graduates from universities	91.9	A	21.3	A	25.7	A	30.8	A	17.0	A	5.2	A
Hiring new graduates from technical schools and colleges	94.9	A	11.2	A	19.0	A	30.1	A	28.4	A	11.3	A
Hiring experienced employees	98.5	A	2.2	A	7.2	A	21.4	A	42.7	A	26.5	A
Recruiting skilled people from outside of Canada	82.6	A	49.5	A	25.9	A	14.7	A	6.3	A	3.7	A
Training employees	98.9	A	1.0	A	3.0	A	15.8	A	40.3	A	39.9	A
Using teams within your firm which bring together people with different skills	92.2	A	5.9	A	10.1	A	25.9	A	33.4	A	24.8	A
Performing research and development within your firm	92.6	A	8.0	A	14.0	A	21.7	A	28.8	A	27.6	A
Involvement in collaboration and cooperation with other firms	90.5	A	15.8	A	21.6	A	29.7	A	23.3	A	9.5	A
Developing new products (goods or services) and processes	94.9	A	4.5	A	8.7	A	19.0	A	33.9	A	33.9	A
Active involvement in developing new industry-wide standards	90.2	A	15.1	A	21.6	A	28.5	A	23.1	A	11.7	A
Food Manufacturing												
Seeking new markets	96.8	A	2.9	A	4.0	A	14.9	A	33.1	A	45.1	A
Satisfying existing clients	98.2	A	0.0	A	0.3	A	3.2	A	19.9	A	76.7	A
Developing niche or specialized markets	95.1	A	1.3	A	10.9	A	23.5	A	33.1	A	31.3	A
Developing export markets	93.8	A	10.5	A	14.9	A	18.1	A	25.0	A	31.5	A
Promoting firm or product (good or service) reputation	98.5	A	0.3	A	2.3	A	11.8	A	34.3	A	51.2	A
Providing after-hour client support services	89.7	A	12.2	A	18.5	A	24.7	A	26.7	A	18.0	A
Hiring new graduates from universities	93.2	A	20.8	A	23.6	A	33.5	A	16.5	A	5.6	A
Hiring new graduates from technical schools and colleges	92.9	A	14.9	A	20.3	A	31.5	A	25.7	A	7.6	A
Hiring experienced employees	98.3	A	2.0	A	8.4	A	26.5	A	43.3	A	19.8	A
Recruiting skilled people from outside of Canada	82.3	A	54.6	A	23.9	A	13.5	A	6.2	A	1.8	A
Training employees	98.8	A	1.6	A	3.1	A	15.8	A	36.3	A	43.3	A
Using teams within your firm which bring together people with different skills	93.8	A	6.2	A	11.8	A	23.2	A	34.9	A	23.9	A
Performing research and development within your firm	95.0	A	6.8	A	13.9	A	19.3	A	31.2	A	28.7	A
Involvement in collaboration and cooperation with other firms	92.2	A	12.6	A	22.5	A	32.0	A	21.1	A	11.9	A
Developing new products (goods or services) and processes	96.6	A	2.4	A	6.2	A	20.6	A	34.5	A	36.4	A
Active involvement in developing new industry-wide standards	93.8	A	11.0	A	14.5	A	32.2	A	26.3	A	16.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Beverage and Tobacco Product Manufacturing												
Seeking new markets	94.1	A	4.5	A	8.2	A	14.7	A	33.2	A	39.5	A
Satisfying existing clients	98.4	A	0.0	A	0.0	A	0.0	A	25.6	A	74.4	A
Developing niche or specialized markets	95.3	A	1.1	A	11.9	A	23.3	A	33.6	A	30.0	A
Developing export markets	92.0	A	15.2	A	21.1	A	20.9	A	14.5	A	28.3	A
Promoting firm or product (good or service) reputation	98.4	A	0.0	A	0.0	A	10.0	A	26.0	A	64.0	A
Providing after-hour client support services	88.1	A	2.5	A	16.7	A	30.8	A	29.2	A	20.9	A
Hiring new graduates from universities	93.4	A	17.2	A	17.5	A	39.8	A	17.1	A	8.3	A
Hiring new graduates from technical schools and colleges	92.5	A	9.2	A	15.9	A	37.4	A	31.5	A	6.0	A
Hiring experienced employees	98.7	A	4.1	A	12.0	A	21.0	A	45.3	A	17.6	A
Recruiting skilled people from outside of Canada	82.0	A	46.1	A	27.8	A	14.9	A	5.5	A	5.8	A
Training employees	100.0	A	3.5	A	1.1	A	8.2	A	46.6	A	40.5	A
Using teams within your firm which bring together people with different skills	96.9	A	8.2	A	2.3	A	24.4	A	41.1	A	23.9	A
Performing research and development within your firm	97.4	A	9.2	A	20.6	A	21.9	A	25.1	A	23.2	A
Involvement in collaboration and cooperation with other firms	94.2	A	19.6	A	23.3	A	33.6	A	18.7	A	4.7	A
Developing new products (goods or services) and processes	94.2	A	9.0	A	9.1	A	23.6	A	36.7	A	21.6	A
Active involvement in developing new industry-wide standards	96.0	A	7.2	A	26.2	A	25.4	A	29.7	A	11.6	A
Textile Mills												
Seeking new markets	97.4	A	3.3	A	5.1	A	17.8	A	31.2	A	42.6	A
Satisfying existing clients	98.0	A	0.7	A	2.0	A	2.0	A	15.7	A	79.5	A
Developing niche or specialized markets	95.3	A	0.0	A	6.7	A	17.5	A	28.0	A	47.9	A
Developing export markets	92.3	A	4.1	A	8.8	A	12.1	A	28.9	A	46.2	A
Promoting firm or product (good or service) reputation	98.0	A	0.0	A	1.9	A	11.1	A	24.7	A	62.3	A
Providing after-hour client support services	92.4	A	11.3	A	12.5	A	31.1	A	30.7	A	14.3	A
Hiring new graduates from universities	95.5	A	17.9	A	15.1	A	44.4	A	18.6	A	3.9	A
Hiring new graduates from technical schools and colleges	97.3	A	14.9	A	13.5	A	24.7	A	29.8	A	17.1	A
Hiring experienced employees	98.7	A	3.2	A	7.8	A	15.8	A	50.4	A	22.8	A
Recruiting skilled people from outside of Canada	87.8	A	47.3	A	20.4	A	16.0	A	11.1	A	5.2	A
Training employees	98.0	A	1.4	A	1.3	A	7.9	A	36.5	A	53.0	A
Using teams within your firm which bring together people with different skills	91.2	A	5.0	A	7.7	A	29.0	A	32.5	A	25.7	A
Performing research and development within your firm	94.4	A	4.3	A	4.8	A	19.6	A	23.0	A	48.4	A
Involvement in collaboration and cooperation with other firms	93.7	A	9.4	A	20.0	A	35.4	A	25.2	A	9.9	A
Developing new products (goods or services) and processes	98.1	A	3.3	A	3.3	A	12.0	A	28.2	A	53.2	A
Active involvement in developing new industry-wide standards	91.2	A	12.5	A	18.9	A	34.6	A	18.0	A	16.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Textile Product Mills												
Seeking new markets	99.2	A	0.0	A	3.4	B	9.6	A	32.4	B	54.6	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	0.8	A	21.3	B	77.9	B
Developing niche or specialized markets	95.1	A	0.0	A	1.6	A	24.9	B	27.9	B	45.6	B
Developing export markets	95.9	A	4.8	A	13.4	B	24.5	B	21.3	B	35.9	B
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	0.8	A	12.2	A	40.1	B	46.9	B
Providing after-hour client support services	85.8	A	26.0	B	18.1	B	25.7	B	22.1	B	8.1	A
Hiring new graduates from universities	88.8	A	36.5	B	21.0	B	31.7	B	10.8	A	0.0	A
Hiring new graduates from technical schools and colleges	91.4	A	24.7	B	30.6	B	25.0	B	18.1	B	1.7	A
Hiring experienced employees	97.6	A	3.1	A	8.0	B	25.8	B	44.2	B	18.9	A
Recruiting skilled people from outside of Canada	87.5	A	49.7	B	28.1	B	18.2	B	0.9	A	3.2	A
Training employees	98.5	A	0.0	A	4.5	A	23.1	B	44.9	B	27.5	B
Using teams within your firm which bring together people with different skills	98.5	A	6.6	A	17.1	B	24.2	A	34.0	B	18.1	B
Performing research and development within your firm	98.4	A	5.2	A	20.8	B	11.9	A	39.6	B	22.6	B
Involvement in collaboration and cooperation with other firms	96.4	A	14.5	B	27.6	B	39.9	B	12.8	A	5.2	A
Developing new products (goods or services) and processes	98.4	A	0.0	A	7.0	A	10.9	B	39.0	B	43.2	B
Active involvement in developing new industry-wide standards	90.8	A	20.3	B	27.5	B	21.2	B	25.8	B	5.2	A
Clothing Manufacturing												
Seeking new markets	97.2	A	0.4	A	2.4	A	15.6	A	30.3	A	51.3	A
Satisfying existing clients	99.2	A	0.0	A	0.8	A	4.6	A	15.7	A	78.9	A
Developing niche or specialized markets	90.3	A	1.4	A	5.2	A	21.3	A	33.2	A	39.0	A
Developing export markets	91.5	A	4.4	A	7.0	A	15.7	A	24.9	A	47.9	A
Promoting firm or product (good or service) reputation	94.8	A	0.9	A	2.6	A	15.2	A	30.4	A	51.0	A
Providing after-hour client support services	78.2	A	25.4	A	22.9	A	22.8	A	18.4	A	10.4	A
Hiring new graduates from universities	84.9	A	37.9	A	27.5	A	26.0	A	7.8	A	0.7	A
Hiring new graduates from technical schools and colleges	88.4	A	23.5	A	21.6	A	35.3	A	14.9	A	4.7	A
Hiring experienced employees	96.3	A	2.5	A	3.3	A	17.9	A	42.6	A	33.7	A
Recruiting skilled people from outside of Canada	70.7	A	47.8	A	17.9	A	18.5	A	9.5	A	6.4	A
Training employees	97.4	A	0.9	A	7.2	A	29.7	A	37.7	A	24.4	A
Using teams within your firm which bring together people with different skills	79.6	A	8.2	A	12.8	A	33.1	A	28.7	A	17.2	A
Performing research and development within your firm	85.1	A	9.7	A	12.8	A	25.0	A	31.3	A	21.3	A
Involvement in collaboration and cooperation with other firms	78.6	A	26.0	A	25.0	A	26.2	A	15.5	A	7.3	A
Developing new products (goods or services) and processes	91.5	A	4.9	A	6.6	A	16.7	A	30.3	A	41.6	A
Active involvement in developing new industry-wide standards	79.7	A	18.3	A	21.6	A	31.8	A	16.3	A	12.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Leather and Allied Product Manufacturing												
Seeking new markets	100.0	A	2.2	A	5.0	A	17.7	B	21.4	B	53.7	B
Satisfying existing clients	100.0	A	0.0	A	1.3	A	0.0	A	13.4	A	85.3	A
Developing niche or specialized markets	96.3	A	0.0	A	0.0	A	5.2	A	44.9	B	49.9	B
Developing export markets	96.5	A	0.0	A	10.1	B	11.4	A	28.7	B	49.8	B
Promoting firm or product (good or service) reputation	100.0	A	7.6	A	2.4	A	12.8	A	33.1	B	44.2	B
Providing after-hour client support services	93.5	A	17.8	B	43.5	B	16.2	B	14.4	B	8.1	A
Hiring new graduates from universities	92.6	A	22.9	B	47.7	B	18.7	B	7.9	A	2.8	A
Hiring new graduates from technical schools and colleges	88.3	A	19.9	B	32.4	B	23.8	B	8.8	A	15.2	B
Hiring experienced employees	100.0	A	3.7	A	14.9	A	22.3	B	36.8	B	22.3	B
Recruiting skilled people from outside of Canada	79.4	B	45.2	B	14.4	B	9.5	A	18.8	B	12.0	A
Training employees	98.7	A	0.0	A	5.0	A	20.4	B	44.3	B	30.3	B
Using teams within your firm which bring together people with different skills	83.1	A	3.1	A	17.2	A	26.6	B	32.3	B	20.8	B
Performing research and development within your firm	95.2	A	1.4	A	1.4	A	32.7	B	20.9	B	43.6	B
Involvement in collaboration and cooperation with other firms	91.1	A	27.8	B	20.4	B	19.0	B	28.5	B	4.3	A
Developing new products (goods or services) and processes	94.8	A	4.8	A	3.7	A	6.4	A	46.3	B	38.8	B
Active involvement in developing new industry-wide standards	83.8	B	7.8	A	45.5	B	17.6	B	14.5	B	14.7	A
Sawmills and Wood Preservation												
Seeking new markets	95.0	A	2.2	A	4.0	A	18.1	A	36.2	A	39.6	A
Satisfying existing clients	97.9	A	0.0	A	0.6	A	4.6	A	25.3	A	69.6	A
Developing niche or specialized markets	93.4	A	3.1	A	4.3	A	16.9	A	38.8	A	36.9	A
Developing export markets	91.3	A	2.4	A	10.0	A	17.2	A	27.2	A	43.1	A
Promoting firm or product (good or service) reputation	94.6	A	0.4	A	3.1	A	15.6	A	34.5	A	46.4	A
Providing after-hour client support services	79.1	A	18.5	A	18.8	A	31.6	A	13.3	A	17.9	A
Hiring new graduates from universities	86.3	A	20.4	A	24.5	A	35.3	A	12.0	A	7.8	A
Hiring new graduates from technical schools and colleges	92.4	A	8.3	A	17.6	A	33.9	A	29.7	A	10.4	A
Hiring experienced employees	97.2	A	1.0	A	2.9	A	16.0	A	51.3	A	28.7	A
Recruiting skilled people from outside of Canada	72.0	A	51.4	A	36.9	A	7.0	A	2.4	A	2.3	A
Training employees	95.5	A	0.4	A	2.6	A	15.4	A	36.2	A	45.4	A
Using teams within your firm which bring together people with different skills	88.2	A	5.9	A	12.1	A	27.3	A	32.8	A	21.9	A
Performing research and development within your firm	85.8	A	12.5	A	16.9	A	30.5	A	23.7	A	16.5	A
Involvement in collaboration and cooperation with other firms	88.9	A	20.5	A	17.9	A	29.1	A	25.3	A	7.2	A
Developing new products (goods or services) and processes	93.6	A	4.6	A	14.2	A	24.7	A	35.0	A	21.4	A
Active involvement in developing new industry-wide standards	86.5	A	11.0	A	19.5	A	29.2	A	25.0	A	15.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Veneer, Plywood and Engineered Wood Product Manufacturing												
Seeking new markets	98.2	A	1.1	A	8.8	A	18.7	A	36.3	A	35.1	A
Satisfying existing clients	100.0	A	1.1	A	1.1	A	1.8	A	15.9	A	80.1	A
Developing niche or specialized markets	89.8	A	1.2	A	7.3	A	19.0	A	36.7	B	35.8	A
Developing export markets	95.3	A	7.0	A	9.3	A	25.8	A	24.3	A	33.5	A
Promoting firm or product (good or service) reputation	98.9	A	4.0	A	3.7	A	6.7	A	25.7	A	60.0	B
Providing after-hour client support services	87.8	A	23.9	A	16.2	A	28.5	A	16.6	A	14.8	A
Hiring new graduates from universities	94.3	A	22.4	A	27.9	A	28.6	A	17.2	A	3.9	A
Hiring new graduates from technical schools and colleges	98.2	A	7.3	A	17.2	A	32.0	A	39.0	B	4.6	A
Hiring experienced employees	98.2	A	5.0	A	13.4	A	21.9	A	38.3	B	21.4	A
Recruiting skilled people from outside of Canada	80.6	A	57.7	B	25.9	A	11.8	A	1.3	A	3.3	A
Training employees	100.0	A	7.3	A	1.1	A	7.6	A	44.1	A	40.0	A
Using teams within your firm which bring together people with different skills	89.4	A	4.2	A	19.7	A	23.7	A	22.5	A	29.8	A
Performing research and development within your firm	90.7	A	5.8	A	21.6	A	20.4	A	31.3	B	20.9	A
Involvement in collaboration and cooperation with other firms	85.5	A	14.5	A	14.0	A	38.0	B	27.6	B	5.8	A
Developing new products (goods or services) and processes	89.6	A	2.6	A	11.9	A	30.1	A	26.0	A	29.4	A
Active involvement in developing new industry-wide standards	89.2	A	13.6	A	17.7	A	28.1	A	27.4	A	13.3	A
Other Wood Product Manufacturing												
Seeking new markets	99.2	A	1.2	A	5.7	A	15.0	A	36.6	A	41.5	A
Satisfying existing clients	98.4	A	0.0	A	0.7	A	3.6	A	22.4	A	73.3	A
Developing niche or specialized markets	96.1	A	2.3	A	9.5	A	27.9	A	36.6	A	23.6	A
Developing export markets	95.5	A	7.5	A	5.7	A	20.7	A	28.3	A	37.9	A
Promoting firm or product (good or service) reputation	96.1	A	0.0	A	3.6	A	14.6	A	29.9	A	51.9	A
Providing after-hour client support services	84.4	A	13.5	A	20.1	A	23.6	A	21.3	A	21.5	A
Hiring new graduates from universities	87.3	A	34.7	A	29.1	A	25.0	A	6.4	A	4.8	A
Hiring new graduates from technical schools and colleges	94.0	A	19.1	A	25.2	A	29.5	A	17.3	A	8.9	A
Hiring experienced employees	100.0	A	5.5	A	8.7	A	30.2	A	32.7	A	22.8	A
Recruiting skilled people from outside of Canada	80.0	A	63.6	A	20.4	A	8.6	A	6.0	A	1.5	A
Training employees	100.0	A	2.5	A	5.2	A	20.6	A	38.1	A	33.6	A
Using teams within your firm which bring together people with different skills	93.0	A	12.2	A	12.9	A	31.0	A	28.8	A	15.2	A
Performing research and development within your firm	94.0	A	5.8	A	23.2	A	29.1	A	28.0	A	14.0	A
Involvement in collaboration and cooperation with other firms	87.2	A	19.2	A	25.6	A	33.7	A	18.0	A	3.5	A
Developing new products (goods or services) and processes	95.1	A	6.5	A	17.8	A	27.1	A	25.8	A	22.8	A
Active involvement in developing new industry-wide standards	84.2	A	25.7	A	22.3	A	19.9	A	23.3	A	8.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Paper Manufacturing												
Seeking new markets	97.1	A	4.5	A	4.1	A	15.2	A	37.6	A	38.6	A
Satisfying existing clients	99.3	A	0.0	A	0.7	A	1.3	A	13.7	A	84.4	A
Developing niche or specialized markets	98.6	A	2.9	A	8.2	A	14.7	A	32.2	A	42.1	A
Developing export markets	96.5	A	11.8	A	12.5	A	18.2	A	28.4	A	29.1	A
Promoting firm or product (good or service) reputation	99.3	A	1.3	A	5.5	A	16.4	A	32.6	A	44.3	A
Providing after-hour client support services	94.2	A	12.1	A	17.9	A	26.3	A	28.7	A	14.9	A
Hiring new graduates from universities	97.4	A	17.9	A	23.1	A	33.2	A	18.9	A	6.8	A
Hiring new graduates from technical schools and colleges	97.8	A	10.2	A	17.9	A	33.9	A	29.3	A	8.7	A
Hiring experienced employees	98.3	A	4.6	A	6.2	A	33.8	A	39.6	A	15.8	A
Recruiting skilled people from outside of Canada	87.2	A	58.4	A	27.5	A	10.9	A	2.9	A	0.4	A
Training employees	99.6	A	0.4	A	1.3	A	10.7	A	37.2	A	50.5	A
Using teams within your firm which bring together people with different skills	98.9	A	4.4	A	9.1	A	23.3	A	37.9	A	25.3	A
Performing research and development within your firm	95.1	A	9.0	A	17.7	A	23.5	A	31.9	A	17.9	A
Involvement in collaboration and cooperation with other firms	90.6	A	17.9	A	16.7	A	36.8	A	23.9	A	4.7	A
Developing new products (goods or services) and processes	96.7	A	8.1	A	10.0	A	25.6	A	32.5	A	23.9	A
Active involvement in developing new industry-wide standards	93.7	A	17.2	A	24.6	A	31.1	A	19.1	A	8.0	A
Printing and Related Support Activities												
Seeking new markets	98.3	A	1.0	A	3.7	A	19.3	A	39.2	A	36.7	A
Satisfying existing clients	99.6	A	0.0	A	0.0	A	0.7	A	16.0	A	83.3	A
Developing niche or specialized markets	97.6	A	1.0	A	3.0	A	16.8	A	38.4	A	40.8	A
Developing export markets	91.3	A	14.9	A	12.6	A	22.8	A	25.0	A	24.8	A
Promoting firm or product (good or service) reputation	98.9	A	0.0	A	4.1	A	14.8	A	29.6	A	51.5	B
Providing after-hour client support services	96.6	A	6.3	A	18.2	A	22.8	A	18.0	A	34.7	A
Hiring new graduates from universities	92.6	A	24.4	A	32.0	A	30.2	A	10.0	A	3.4	A
Hiring new graduates from technical schools and colleges	97.1	A	10.8	A	20.8	A	28.7	A	26.4	A	13.4	A
Hiring experienced employees	99.6	A	1.4	A	4.1	A	14.5	A	42.3	A	37.7	A
Recruiting skilled people from outside of Canada	82.1	A	61.1	B	22.4	A	12.2	A	1.8	A	2.5	A
Training employees	99.0	A	1.4	A	3.3	A	15.4	A	37.5	A	42.3	A
Using teams within your firm which bring together people with different skills	93.9	A	8.0	A	6.1	A	27.7	A	30.8	A	27.4	A
Performing research and development within your firm	90.4	A	14.8	A	18.7	A	23.8	A	29.4	A	13.2	A
Involvement in collaboration and cooperation with other firms	91.9	A	17.2	A	21.8	A	28.5	A	20.7	A	11.8	A
Developing new products (goods or services) and processes	96.3	A	5.9	A	14.4	A	21.9	A	31.1	A	26.7	A
Active involvement in developing new industry-wide standards	92.4	A	20.2	A	24.5	A	33.4	A	13.9	A	8.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing												
Seeking new markets	90.7	A	2.0	A	3.1	A	27.6	A	34.7	A	32.7	A
Satisfying existing clients	100.0	A	1.9	A	0.0	A	0.0	A	25.9	A	72.2	A
Developing niche or specialized markets	92.6	A	2.0	A	12.0	A	19.0	A	43.0	A	24.0	A
Developing export markets	85.2	A	12.0	A	17.4	A	17.4	A	31.5	A	21.7	A
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	3.7	A	13.0	A	31.5	A	51.9	A
Providing after-hour client support services	87.0	A	5.3	A	22.3	A	31.9	A	27.7	A	12.8	A
Hiring new graduates from universities	98.1	A	15.1	A	17.0	A	28.3	A	22.6	A	17.0	A
Hiring new graduates from technical schools and colleges	100.0	A	6.5	A	9.3	A	41.7	A	33.3	A	9.3	A
Hiring experienced employees	98.1	A	0.0	A	5.7	A	36.8	A	32.1	A	25.5	A
Recruiting skilled people from outside of Canada	81.5	A	58.0	A	26.1	A	15.9	A	0.0	A	0.0	A
Training employees	100.0	A	1.9	A	3.7	A	4.6	A	48.1	A	41.7	A
Using teams within your firm which bring together people with different skills	96.3	A	1.9	A	11.5	A	21.2	A	30.8	A	34.6	A
Performing research and development within your firm	96.3	A	14.4	A	17.3	A	13.5	A	29.8	A	25.0	A
Involvement in collaboration and cooperation with other firms	92.6	A	2.0	A	14.0	A	40.0	A	30.0	A	14.0	A
Developing new products (goods or services) and processes	92.6	A	4.0	A	13.0	A	24.0	A	39.0	A	20.0	A
Active involvement in developing new industry-wide standards	96.3	A	8.7	A	11.5	A	26.9	A	41.3	A	11.5	A
Chemical Manufacturing (excluding 3254)												
Seeking new markets	99.1	A	1.0	A	6.7	A	18.3	A	34.8	A	39.1	A
Satisfying existing clients	99.3	A	0.4	A	0.6	A	1.7	A	20.2	A	77.1	A
Developing niche or specialized markets	97.8	A	1.8	A	5.2	A	19.1	A	43.2	A	30.8	A
Developing export markets	94.1	A	13.1	A	12.3	A	24.7	A	24.7	A	25.2	A
Promoting firm or product (good or service) reputation	99.1	A	0.6	A	4.7	A	12.5	A	38.0	A	44.2	A
Providing after-hour client support services	93.5	A	6.0	A	19.1	A	26.3	A	25.9	A	22.7	A
Hiring new graduates from universities	95.2	A	9.3	A	24.3	A	35.0	A	24.4	A	7.1	A
Hiring new graduates from technical schools and colleges	96.8	A	6.5	A	21.8	A	33.8	A	29.8	A	8.1	A
Hiring experienced employees	96.8	A	2.4	A	12.6	A	23.1	A	46.5	A	15.4	A
Recruiting skilled people from outside of Canada	86.6	A	49.9	A	31.1	A	13.9	A	4.0	A	1.1	A
Training employees	99.5	A	0.5	A	2.4	A	13.0	A	40.1	A	44.0	A
Using teams within your firm which bring together people with different skills	95.0	A	5.2	A	4.8	A	22.1	A	36.9	A	31.0	A
Performing research and development within your firm	96.0	A	2.6	A	12.2	A	19.8	A	26.1	A	39.4	A
Involvement in collaboration and cooperation with other firms	91.1	A	11.2	A	20.0	A	27.6	A	32.5	A	8.7	A
Developing new products (goods or services) and processes	96.8	A	2.3	A	7.0	A	13.0	A	36.7	A	40.9	A
Active involvement in developing new industry-wide standards	93.2	A	6.8	A	20.8	A	31.3	A	28.3	A	12.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Pharmaceutical and Medicine Manufacturing (3254)												
Seeking new markets	98.4	A	1.6	A	0.0	A	8.1	A	35.3	B	55.0	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	0.0	A	17.3	A	82.7	A
Developing niche or specialized markets	98.4	A	1.6	A	6.6	A	19.4	A	34.9	A	37.6	A
Developing export markets	93.5	A	10.0	A	18.3	A	14.7	A	21.5	A	35.4	B
Promoting firm or product (good or service) reputation	98.4	A	4.4	A	1.9	A	17.2	A	31.1	B	45.4	B
Providing after-hour client support services	87.7	A	10.4	A	17.8	A	29.0	A	22.4	A	20.4	A
Hiring new graduates from universities	100.0	A	7.5	A	26.0	A	37.0	A	24.4	A	5.1	A
Hiring new graduates from technical schools and colleges	100.0	A	8.6	A	28.0	A	30.7	A	22.5	A	10.2	A
Hiring experienced employees	100.0	A	0.0	A	5.6	A	16.7	A	54.4	B	23.3	A
Recruiting skilled people from outside of Canada	92.0	A	38.9	B	23.1	B	22.7	A	12.4	A	2.9	A
Training employees	100.0	A	0.0	A	0.0	A	14.6	A	35.7	A	49.6	A
Using teams within your firm which bring together people with different skills	93.6	A	1.7	A	1.7	A	21.4	A	34.9	A	40.3	B
Performing research and development within your firm	96.8	A	1.7	A	6.3	A	15.4	A	21.8	A	54.9	B
Involvement in collaboration and cooperation with other firms	89.5	A	8.4	A	17.5	B	23.0	A	31.1	B	20.0	A
Developing new products (goods or services) and processes	91.6	A	1.8	A	2.0	A	4.4	A	35.5	A	56.4	B
Active involvement in developing new industry-wide standards	92.5	A	13.3	A	29.3	B	19.9	A	24.8	A	12.8	A
Plastics and Rubber Products Manufacturing												
Seeking new markets	98.6	A	1.4	A	4.6	A	14.8	A	37.9	A	41.3	A
Satisfying existing clients	99.7	A	0.6	A	0.4	A	2.9	A	14.4	A	81.7	A
Developing niche or specialized markets	98.1	A	2.5	A	4.5	A	17.8	A	37.2	A	37.9	A
Developing export markets	97.8	A	8.0	A	8.6	A	17.9	A	34.1	A	31.3	A
Promoting firm or product (good or service) reputation	99.1	A	0.6	A	4.2	A	11.8	A	30.5	A	52.9	A
Providing after-hour client support services	90.5	A	9.0	A	19.1	A	29.7	A	25.3	A	17.0	A
Hiring new graduates from universities	91.7	A	19.5	A	25.4	A	30.5	A	16.1	A	8.5	A
Hiring new graduates from technical schools and colleges	94.6	A	9.9	A	17.3	A	29.9	A	31.0	A	11.8	A
Hiring experienced employees	98.2	A	2.7	A	9.2	A	20.1	A	43.7	A	24.3	A
Recruiting skilled people from outside of Canada	84.5	A	49.3	A	28.3	A	15.2	A	5.5	A	1.7	A
Training employees	99.2	A	0.7	A	4.3	A	11.5	A	35.1	A	48.4	A
Using teams within your firm which bring together people with different skills	95.6	A	4.8	A	10.1	A	18.0	A	36.0	A	31.2	A
Performing research and development within your firm	95.4	A	4.4	A	8.0	A	19.9	A	29.6	A	38.1	A
Involvement in collaboration and cooperation with other firms	91.6	A	15.0	A	19.1	A	28.3	A	22.6	A	15.0	A
Developing new products (goods or services) and processes	97.4	A	1.2	A	6.2	A	13.2	A	36.0	A	43.4	A
Active involvement in developing new industry-wide standards	94.2	A	14.6	A	22.4	A	30.6	A	21.1	A	11.3	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Non-Metallic Mineral Products Manufacturing												
Seeking new markets	98.1	A	4.1	A	10.1	A	20.5	A	27.8	A	37.4	A
Satisfying existing clients	99.7	A	0.8	A	0.0	A	3.3	A	15.9	A	80.0	A
Developing niche or specialized markets	92.9	A	4.1	A	6.9	A	23.9	A	32.5	A	32.6	A
Developing export markets	85.3	A	20.2	A	12.9	A	17.8	A	21.5	A	27.5	A
Promoting firm or product (good or service) reputation	98.6	A	0.8	A	0.9	A	18.8	A	29.2	A	50.3	A
Providing after-hour client support services	92.1	A	12.8	A	17.8	A	18.0	A	26.9	A	24.5	A
Hiring new graduates from universities	89.3	A	24.3	A	28.5	A	22.6	A	16.6	A	8.1	A
Hiring new graduates from technical schools and colleges	90.9	A	18.7	A	21.4	A	26.5	A	22.1	A	11.3	A
Hiring experienced employees	98.4	A	3.1	A	11.8	A	25.4	A	37.5	A	22.2	A
Recruiting skilled people from outside of Canada	74.2	A	59.8	A	20.8	A	9.1	A	5.9	A	4.5	A
Training employees	99.7	A	0.3	A	3.5	A	19.0	A	36.1	A	41.1	A
Using teams within your firm which bring together people with different skills	89.5	A	10.2	A	14.8	A	27.6	A	25.4	A	22.0	A
Performing research and development within your firm	91.5	A	12.6	A	14.0	A	27.2	A	27.9	A	18.3	A
Involvement in collaboration and cooperation with other firms	88.9	A	21.4	A	20.8	A	30.0	A	20.4	A	7.5	A
Developing new products (goods or services) and processes	93.1	A	4.8	A	13.4	A	24.1	A	24.7	A	33.0	A
Active involvement in developing new industry-wide standards	91.7	A	18.4	A	18.4	A	23.1	A	26.3	A	13.9	A
Primary Metal Manufacturing												
Seeking new markets	98.6	A	4.1	A	5.1	A	19.7	A	38.6	A	32.5	A
Satisfying existing clients	99.5	A	0.0	A	0.0	A	1.0	A	14.3	A	84.7	A
Developing niche or specialized markets	96.4	A	2.6	A	9.0	A	14.1	A	40.5	A	33.7	A
Developing export markets	97.2	A	12.1	A	8.5	A	18.1	A	31.9	A	29.3	A
Promoting firm or product (good or service) reputation	99.5	A	1.7	A	7.3	A	12.3	A	32.8	A	45.9	A
Providing after-hour client support services	88.0	A	16.6	A	26.4	A	25.9	A	17.1	A	14.0	A
Hiring new graduates from universities	95.6	A	23.1	A	19.9	A	26.7	A	20.8	A	9.5	A
Hiring new graduates from technical schools and colleges	96.0	A	9.9	A	21.0	A	28.5	A	28.0	A	12.6	A
Hiring experienced employees	97.9	A	3.3	A	12.0	A	26.1	A	40.9	A	17.7	A
Recruiting skilled people from outside of Canada	87.9	A	50.6	A	27.1	A	13.8	A	5.5	A	3.0	A
Training employees	100.0	A	0.7	A	1.0	A	11.0	A	44.6	A	42.6	A
Using teams within your firm which bring together people with different skills	95.6	A	5.4	A	5.7	A	21.4	A	34.6	A	32.8	A
Performing research and development within your firm	93.2	A	4.5	A	15.1	A	23.6	A	38.9	A	17.9	A
Involvement in collaboration and cooperation with other firms	87.7	A	20.1	A	24.0	A	26.8	A	20.8	A	8.3	A
Developing new products (goods or services) and processes	92.5	A	5.2	A	8.1	A	29.7	A	36.8	A	20.2	A
Active involvement in developing new industry-wide standards	87.8	A	18.9	A	17.2	A	29.9	A	25.5	A	8.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing												
Seeking new markets	97.9	A	2.5	A	7.3	A	22.2	A	33.7	A	34.4	A
Satisfying existing clients	99.0	A	0.5	A	0.4	A	2.0	A	13.1	A	84.0	A
Developing niche or specialized markets	93.8	A	2.5	A	8.3	A	23.2	A	29.6	A	36.4	A
Developing export markets	92.8	A	10.8	A	10.8	A	18.3	A	26.2	A	33.9	A
Promoting firm or product (good or service) reputation	98.5	A	0.8	A	3.3	A	10.9	A	31.3	A	53.6	A
Providing after-hour client support services	90.7	A	14.6	A	17.1	A	25.0	A	21.4	A	21.9	A
Hiring new graduates from universities	89.0	A	22.0	A	26.6	A	34.5	A	14.3	A	2.6	A
Hiring new graduates from technical schools and colleges	94.9	A	8.4	A	17.0	A	33.9	A	27.1	A	13.6	A
Hiring experienced employees	99.0	A	1.2	A	5.6	A	21.9	A	39.3	A	32.0	A
Recruiting skilled people from outside of Canada	81.0	A	48.6	A	25.1	A	15.5	A	4.6	A	6.2	A
Training employees	98.7	A	1.0	A	3.2	A	15.5	A	43.5	A	36.8	A
Using teams within your firm which bring together people with different skills	90.9	A	4.9	A	11.5	A	31.4	A	32.8	A	19.4	A
Performing research and development within your firm	87.5	A	10.4	A	19.8	A	24.6	A	25.0	A	20.1	A
Involvement in collaboration and cooperation with other firms	90.7	A	17.3	A	22.7	A	32.8	A	18.5	A	8.6	A
Developing new products (goods or services) and processes	91.7	A	8.8	A	10.1	A	22.8	A	34.4	A	24.0	A
Active involvement in developing new industry-wide standards	89.8	A	19.9	A	17.0	A	29.4	A	23.2	A	10.5	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)												
Seeking new markets	98.4	A	3.1	A	4.8	A	16.2	A	34.3	A	41.6	A
Satisfying existing clients	99.2	A	0.0	A	1.1	A	2.6	A	17.7	A	78.7	A
Developing niche or specialized markets	97.8	A	1.0	A	6.1	A	17.2	A	46.9	A	28.8	A
Developing export markets	98.5	A	1.6	A	6.7	A	15.4	A	34.3	A	42.1	A
Promoting firm or product (good or service) reputation	100.0	A	0.5	A	1.9	A	7.9	A	33.6	A	56.1	A
Providing after-hour client support services	97.6	A	2.2	A	15.6	A	22.2	A	26.2	A	33.8	A
Hiring new graduates from universities	98.0	A	15.4	A	22.5	A	37.1	A	19.0	A	6.0	A
Hiring new graduates from technical schools and colleges	99.6	A	4.1	A	18.1	A	35.5	A	31.5	A	10.8	A
Hiring experienced employees	99.6	A	0.0	A	3.2	A	15.6	A	53.2	A	28.0	A
Recruiting skilled people from outside of Canada	87.1	A	44.2	A	28.9	A	18.8	A	4.8	A	3.3	A
Training employees	99.2	A	0.0	A	3.0	A	20.5	A	44.7	A	31.9	A
Using teams within your firm which bring together people with different skills	94.1	A	7.1	A	10.9	A	25.6	A	37.4	A	19.0	A
Performing research and development within your firm	98.0	A	3.0	A	9.1	A	16.6	A	23.3	A	48.0	A
Involvement in collaboration and cooperation with other firms	95.5	A	11.2	A	14.9	A	29.0	A	32.2	A	12.7	A
Developing new products (goods or services) and processes	98.5	A	0.0	A	8.6	A	14.5	A	30.8	A	46.1	A
Active involvement in developing new industry-wide standards	91.6	A	16.5	A	29.3	A	24.7	A	20.9	A	8.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)												
Seeking new markets	98.4	A	0.4	A	8.0	A	15.7	A	34.1	A	41.8	A
Satisfying existing clients	99.7	A	0.0	A	0.0	A	2.9	A	20.3	A	76.7	A
Developing niche or specialized markets	97.4	A	0.6	A	5.2	A	15.1	A	40.3	A	38.8	A
Developing export markets	96.9	A	4.1	A	8.6	A	18.1	A	33.3	A	35.9	A
Promoting firm or product (good or service) reputation	98.7	A	1.5	A	3.7	A	14.3	A	32.6	A	48.0	A
Providing after-hour client support services	92.9	A	7.4	A	16.5	A	22.9	A	22.0	A	31.2	A
Hiring new graduates from universities	93.0	A	15.3	A	24.7	A	32.4	A	23.0	A	4.5	A
Hiring new graduates from technical schools and colleges	96.1	A	5.8	A	9.9	A	28.1	A	39.1	A	17.1	A
Hiring experienced employees	98.9	A	2.8	A	3.3	A	15.7	A	46.5	A	31.6	A
Recruiting skilled people from outside of Canada	85.4	A	36.2	A	32.7	A	20.0	A	8.0	A	3.0	A
Training employees	99.7	A	0.6	A	1.0	A	16.9	A	43.3	A	38.2	A
Using teams within your firm which bring together people with different skills	95.0	A	2.9	A	10.9	A	25.7	A	36.7	A	23.8	A
Performing research and development within your firm	95.7	A	3.1	A	11.7	A	16.8	A	39.0	A	29.4	A
Involvement in collaboration and cooperation with other firms	95.4	A	10.4	A	21.1	A	31.5	A	27.6	A	9.4	A
Developing new products (goods or services) and processes	94.4	A	3.3	A	6.7	A	17.2	A	37.8	A	35.0	A
Active involvement in developing new industry-wide standards	92.1	A	10.7	A	27.7	A	28.4	A	23.6	A	9.6	A
Computer and Peripheral Equipment Manufacturing												
Seeking new markets	95.6	A	0.0	A	17.4	A	16.1	B	21.7	B	44.8	B
Satisfying existing clients	95.6	A	5.6	B	0.0	A	2.3	A	7.0	A	85.1	B
Developing niche or specialized markets	95.6	A	0.0	A	0.0	A	7.6	A	34.7	B	57.8	B
Developing export markets	95.6	A	9.3	A	10.7	B	15.3	B	17.8	B	46.9	B
Promoting firm or product (good or service) reputation	97.8	A	2.3	A	7.2	A	8.0	A	35.6	B	47.0	B
Providing after-hour client support services	91.1	A	7.9	A	25.4	B	16.7	B	12.6	A	37.4	B
Hiring new graduates from universities	97.8	A	14.8	A	27.5	B	12.5	B	21.0	A	24.2	B
Hiring new graduates from technical schools and colleges	100.0	A	11.5	A	22.8	B	16.3	B	20.9	B	28.5	B
Hiring experienced employees	100.0	A	2.2	A	2.2	A	10.4	B	49.4	B	35.7	B
Recruiting skilled people from outside of Canada	97.8	A	29.5	B	28.0	B	21.2	B	9.8	B	11.4	A
Training employees	100.0	A	0.0	A	0.0	A	18.9	A	36.1	B	45.0	B
Using teams within your firm which bring together people with different skills	100.0	A	7.8	A	8.9	A	21.7	B	29.3	B	32.4	B
Performing research and development within your firm	100.0	A	12.8	B	4.4	A	9.8	B	19.3	B	53.7	B
Involvement in collaboration and cooperation with other firms	97.2	A	12.4	B	12.6	A	14.5	B	44.6	B	16.0	A
Developing new products (goods or services) and processes	100.0	A	2.2	A	7.8	A	4.4	A	33.7	B	51.9	B
Active involvement in developing new industry-wide standards	97.4	A	15.4	B	18.6	B	21.7	B	16.9	B	27.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Communications Equipment Manufacturing												
Seeking new markets	100.0	A	1.5	A	4.7	A	9.3	A	29.1	B	55.4	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	0.0	A	23.5	B	76.5	B
Developing niche or specialized markets	100.0	A	0.0	A	3.0	A	20.7	A	39.8	B	36.5	B
Developing export markets	98.5	A	4.0	A	3.1	A	19.3	B	31.2	A	42.4	B
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	1.6	A	8.0	A	47.3	A	43.1	A
Providing after-hour client support services	95.3	A	4.8	A	17.5	B	25.3	A	32.9	B	19.6	B
Hiring new graduates from universities	98.5	A	7.4	A	15.6	B	19.3	A	51.6	B	6.2	A
Hiring new graduates from technical schools and colleges	100.0	A	4.9	A	6.5	A	23.2	B	56.3	B	9.1	A
Hiring experienced employees	100.0	A	1.5	A	1.5	A	28.1	A	56.4	B	12.5	A
Recruiting skilled people from outside of Canada	95.3	A	34.0	B	38.5	B	14.4	A	11.5	A	1.6	A
Training employees	100.0	A	0.0	A	3.0	A	11.9	A	54.3	B	30.7	B
Using teams within your firm which bring together people with different skills	96.8	A	0.0	A	1.6	A	42.7	A	32.3	B	23.5	B
Performing research and development within your firm	100.0	A	1.5	A	14.8	A	3.6	A	22.3	B	57.8	B
Involvement in collaboration and cooperation with other firms	98.4	A	5.5	A	19.5	A	26.8	A	29.8	B	18.3	B
Developing new products (goods or services) and processes	98.5	A	0.0	A	4.6	A	7.2	A	27.2	B	61.0	B
Active involvement in developing new industry-wide standards	95.5	A	8.1	A	25.9	B	24.0	A	30.5	A	11.6	B
Audio and Video Equipment Manufacturing												
Seeking new markets	x	A	x	A	x	A	x	A	x	A	x	A
Satisfying existing clients	x	A	x	A	x	A	x	A	x	A	x	A
Developing niche or specialized markets	x	A	x	A	x	A	x	A	x	A	x	A
Developing export markets	x	A	x	A	x	A	x	A	x	A	x	A
Promoting firm or product (good or service) reputation	x	A	x	A	x	A	x	A	x	A	x	A
Providing after-hour client support services	x	A	x	A	x	A	x	A	x	A	x	A
Hiring new graduates from universities	x	A	x	A	x	A	x	A	x	A	x	A
Hiring new graduates from technical schools and colleges	x	A	x	A	x	A	x	A	x	A	x	A
Hiring experienced employees	x	A	x	A	x	A	x	A	x	A	x	A
Recruiting skilled people from outside of Canada	x	A	x	A	x	A	x	A	x	A	x	A
Training employees	x	A	x	A	x	A	x	A	x	A	x	A
Using teams within your firm which bring together people with different skills	x	A	x	A	x	A	x	A	x	A	x	A
Performing research and development within your firm	x	A	x	A	x	A	x	A	x	A	x	A
Involvement in collaboration and cooperation with other firms	x	A	x	A	x	A	x	A	x	A	x	A
Developing new products (goods or services) and processes	x	A	x	A	x	A	x	A	x	A	x	A
Active involvement in developing new industry-wide standards	x	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing												
Seeking new markets	100.0	A	0.0	A	2.2	A	8.3	A	47.8	B	41.7	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	0.0	A	19.6	A	80.4	A
Developing niche or specialized markets	100.0	A	0.0	A	2.2	A	14.7	A	46.6	B	36.6	B
Developing export markets	97.8	A	0.0	A	9.5	A	22.4	A	31.7	B	36.4	B
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	7.3	A	17.7	A	24.9	B	50.1	B
Providing after-hour client support services	93.6	A	12.3	A	14.4	A	25.6	B	25.5	B	22.2	B
Hiring new graduates from universities	100.0	A	15.6	A	23.9	A	21.8	B	19.9	B	18.9	B
Hiring new graduates from technical schools and colleges	100.0	A	11.4	A	19.9	A	23.1	A	30.1	B	15.6	A
Hiring experienced employees	100.0	A	2.0	A	2.0	A	15.4	A	39.3	B	41.2	B
Recruiting skilled people from outside of Canada	95.8	A	36.8	B	13.0	A	22.6	B	13.3	A	14.2	A
Training employees	100.0	A	0.0	A	0.0	A	16.6	A	56.1	B	27.3	B
Using teams within your firm which bring together people with different skills	98.0	A	7.3	A	7.4	A	12.9	A	52.7	B	19.7	A
Performing research and development within your firm	84.7	A	0.0	A	7.7	A	9.9	A	24.8	B	57.5	B
Involvement in collaboration and cooperation with other firms	90.8	A	13.9	A	20.4	A	25.6	A	26.1	B	14.0	A
Developing new products (goods or services) and processes	90.8	A	0.0	A	4.8	A	11.2	A	39.0	B	44.9	B
Active involvement in developing new industry-wide standards	85.7	A	18.2	A	21.9	B	23.2	B	24.6	A	12.2	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media												
Seeking new markets	96.7	A	1.8	A	4.2	A	14.4	A	31.3	A	48.3	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	2.6	A	15.6	A	81.8	A
Developing niche or specialized markets	96.3	A	0.0	A	2.7	A	10.5	A	40.0	A	46.8	B
Developing export markets	97.4	A	8.5	A	1.8	A	16.3	A	21.0	B	52.4	B
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	1.0	A	11.4	A	37.0	B	50.7	B
Providing after-hour client support services	100.0	A	6.0	A	17.3	A	23.9	B	22.9	A	29.9	B
Hiring new graduates from universities	97.3	A	9.0	A	20.4	A	25.3	B	31.4	B	13.8	A
Hiring new graduates from technical schools and colleges	100.0	A	5.3	A	15.7	A	28.6	B	38.0	B	12.4	A
Hiring experienced employees	100.0	A	0.0	A	5.2	A	21.5	B	47.4	B	25.8	B
Recruiting skilled people from outside of Canada	88.2	A	30.9	B	34.7	A	15.5	A	9.8	A	9.0	A
Training employees	100.0	A	0.0	A	0.0	A	15.2	A	38.8	A	46.0	B
Using teams within your firm which bring together people with different skills	96.5	A	5.5	A	9.9	A	15.5	A	35.7	B	33.4	B
Performing research and development within your firm	97.6	A	2.6	A	5.2	A	19.4	A	23.0	A	49.8	B
Involvement in collaboration and cooperation with other firms	97.5	A	3.6	A	25.9	B	14.1	A	37.6	B	18.8	A
Developing new products (goods or services) and processes	100.0	A	5.5	A	6.8	A	12.6	A	23.5	A	51.6	B
Active involvement in developing new industry-wide standards	98.1	A	6.9	A	22.3	A	25.0	B	28.4	B	17.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Electrical Equipment, Appliance and Component Manufacturing												
Seeking new markets	97.6	A	1.9	A	4.9	A	16.4	A	36.8	A	39.9	A
Satisfying existing clients	100.0	A	1.0	A	0.0	A	3.0	A	17.7	A	78.3	A
Developing niche or specialized markets	99.5	A	1.9	A	6.9	A	28.5	A	35.1	A	27.6	A
Developing export markets	97.1	A	7.2	A	7.7	A	17.3	A	32.5	A	35.3	A
Promoting firm or product (good or service) reputation	100.0	A	1.9	A	3.4	A	7.1	A	42.5	A	45.1	A
Providing after-hour client support services	96.9	A	8.3	A	23.5	A	26.0	A	23.0	A	19.2	A
Hiring new graduates from universities	96.1	A	13.2	A	23.7	A	29.8	A	25.7	A	7.6	A
Hiring new graduates from technical schools and colleges	100.0	A	4.5	A	19.5	A	32.1	A	33.2	A	10.8	A
Hiring experienced employees	98.2	A	1.4	A	12.6	A	29.0	A	37.7	A	19.3	A
Recruiting skilled people from outside of Canada	91.4	A	46.9	A	30.2	A	11.5	A	7.3	A	4.2	A
Training employees	98.2	A	0.0	A	3.9	A	16.5	A	43.4	A	36.3	A
Using teams within your firm which bring together people with different skills	96.0	A	2.5	A	10.0	A	26.1	A	29.9	A	31.5	A
Performing research and development within your firm	94.9	A	6.2	A	12.3	A	18.8	A	32.1	A	30.6	A
Involvement in collaboration and cooperation with other firms	95.9	A	10.5	A	24.2	A	24.4	A	29.5	A	11.3	A
Developing new products (goods or services) and processes	97.8	A	1.2	A	10.1	A	15.0	A	38.7	A	35.0	A
Active involvement in developing new industry-wide standards	93.8	A	6.0	A	19.9	A	29.2	A	32.1	A	12.8	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing												
Seeking new markets	96.5	A	4.2	A	5.3	A	14.8	A	37.5	A	38.3	A
Satisfying existing clients	97.7	A	0.0	A	0.3	A	1.0	A	13.0	A	85.7	A
Developing niche or specialized markets	95.2	A	2.7	A	11.0	A	23.9	A	29.9	A	32.5	A
Developing export markets	93.1	A	6.2	A	14.2	A	16.3	A	37.7	A	25.6	A
Promoting firm or product (good or service) reputation	98.3	A	0.0	A	2.2	A	12.9	A	27.0	A	58.0	A
Providing after-hour client support services	98.6	A	7.4	A	19.0	A	22.9	A	26.9	A	23.9	A
Hiring new graduates from universities	95.2	A	20.0	A	19.7	A	29.7	A	27.4	A	3.3	A
Hiring new graduates from technical schools and colleges	97.0	A	10.8	A	13.2	A	24.6	A	39.7	A	11.7	A
Hiring experienced employees	98.6	A	1.7	A	8.2	A	24.6	A	42.3	A	23.2	A
Recruiting skilled people from outside of Canada	90.4	A	39.8	A	30.5	A	17.9	A	8.7	A	3.1	A
Training employees	98.2	A	1.2	A	1.3	A	13.3	A	39.3	A	45.0	A
Using teams within your firm which bring together people with different skills	96.5	A	6.8	A	6.0	A	20.6	A	35.7	A	30.9	A
Performing research and development within your firm	91.4	A	11.0	A	8.4	A	12.2	A	34.1	A	34.3	A
Involvement in collaboration and cooperation with other firms	90.6	A	17.2	A	23.4	A	27.2	A	26.0	A	6.2	A
Developing new products (goods or services) and processes	92.6	A	4.1	A	9.1	A	15.5	A	38.6	A	32.7	A
Active involvement in developing new industry-wide standards	89.0	A	13.0	A	24.8	A	26.0	A	21.8	A	14.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Aerospace Product and Parts Manufacturing												
Seeking new markets	96.5	A	4.5	A	13.8	B	11.7	A	29.1	B	40.9	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	1.7	A	10.6	A	87.7	A
Developing niche or specialized markets	94.7	A	0.0	A	1.5	A	11.4	A	45.9	B	41.2	B
Developing export markets	89.6	A	4.1	A	7.1	A	15.7	A	34.6	B	38.5	B
Promoting firm or product (good or service) reputation	98.0	A	1.7	A	4.4	A	6.2	A	35.1	B	52.6	B
Providing after-hour client support services	87.9	A	8.4	A	10.6	A	24.9	B	36.9	B	19.1	B
Hiring new graduates from universities	96.3	A	14.6	A	31.7	B	28.9	B	18.5	A	6.3	A
Hiring new graduates from technical schools and colleges	96.3	A	0.0	A	11.9	A	22.6	B	40.8	B	24.8	B
Hiring experienced employees	100.0	A	0.0	A	3.7	A	18.5	B	28.3	B	49.5	B
Recruiting skilled people from outside of Canada	92.0	A	37.6	B	19.4	B	26.6	B	9.9	A	6.4	A
Training employees	100.0	A	0.0	A	0.0	A	11.3	B	40.2	B	48.5	B
Using teams within your firm which bring together people with different skills	97.3	A	7.1	A	3.8	A	21.2	B	34.0	B	34.0	B
Performing research and development within your firm	97.3	A	17.2	B	13.6	A	17.0	A	23.0	B	29.3	B
Involvement in collaboration and cooperation with other firms	91.2	A	3.8	A	27.2	B	27.1	B	27.3	B	14.6	A
Developing new products (goods or services) and processes	87.5	A	6.7	A	10.8	A	18.5	B	37.2	B	26.9	B
Active involvement in developing new industry-wide standards	90.2	A	12.6	A	35.3	B	18.3	B	13.7	A	20.1	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment												
Seeking new markets	97.9	A	1.8	A	8.9	B	20.6	B	36.8	B	31.9	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	1.3	A	29.8	B	68.9	B
Developing niche or specialized markets	95.7	A	4.1	A	3.2	A	16.9	B	38.0	B	37.8	B
Developing export markets	93.6	A	8.8	A	7.1	A	31.0	B	17.9	B	35.2	B
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	0.0	A	13.0	A	30.1	B	56.9	B
Providing after-hour client support services	98.6	A	6.7	B	16.0	A	16.1	A	18.7	B	42.5	B
Hiring new graduates from universities	95.3	A	25.9	B	31.0	B	25.4	B	16.3	B	1.4	A
Hiring new graduates from technical schools and colleges	96.6	A	6.7	A	22.2	B	22.7	B	28.0	B	20.4	B
Hiring experienced employees	100.0	A	0.0	A	9.9	A	13.7	B	35.7	B	40.7	B
Recruiting skilled people from outside of Canada	87.9	A	55.4	B	29.5	B	3.2	A	10.4	A	1.5	A
Training employees	97.9	A	0.0	A	2.2	A	12.9	A	39.0	B	45.9	B
Using teams within your firm which bring together people with different skills	85.3	A	3.6	A	4.0	A	23.0	B	39.7	B	29.7	B
Performing research and development within your firm	93.6	A	12.8	B	11.7	B	24.2	B	23.3	B	28.1	B
Involvement in collaboration and cooperation with other firms	82.3	B	4.7	A	25.6	B	35.3	B	26.0	B	8.4	B
Developing new products (goods or services) and processes	92.3	A	1.4	A	11.8	B	15.2	B	41.4	B	30.3	B
Active involvement in developing new industry-wide standards	90.1	A	7.7	A	29.3	B	31.2	B	18.5	B	13.3	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.3
Firm Success Factors
Industry by Factor
Canada, All Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing												
Seeking new markets	98.3	A	4.5	A	6.5	A	15.0	A	37.8	A	36.2	A
Satisfying existing clients	98.7	A	0.0	A	0.0	A	2.8	A	17.2	A	80.0	A
Developing niche or specialized markets	93.9	A	2.1	A	4.6	A	25.9	A	37.1	A	30.3	A
Developing export markets	94.9	A	5.6	A	8.0	A	16.9	A	34.0	A	35.5	A
Promoting firm or product (good or service) reputation	97.3	A	1.9	A	3.6	A	10.0	A	32.0	A	52.5	A
Providing after-hour client support services	86.4	A	18.3	A	22.2	A	21.8	A	24.6	A	13.2	A
Hiring new graduates from universities	88.1	A	18.7	A	40.1	A	24.8	A	13.4	A	3.0	A
Hiring new graduates from technical schools and colleges	92.0	A	10.7	A	26.6	A	27.7	A	26.4	A	8.6	A
Hiring experienced employees	96.8	A	2.5	A	5.2	A	18.2	A	46.0	A	28.0	A
Recruiting skilled people from outside of Canada	78.0	A	51.9	A	20.6	A	16.9	A	7.0	A	3.7	A
Training employees	97.8	A	1.7	A	0.9	A	16.0	A	43.4	A	38.0	A
Using teams within your firm which bring together people with different skills	85.3	A	7.1	A	10.0	A	31.2	A	27.1	A	24.6	A
Performing research and development within your firm	91.8	A	6.5	A	10.5	A	30.6	A	29.3	A	23.2	A
Involvement in collaboration and cooperation with other firms	84.6	A	21.6	A	24.3	A	25.4	A	21.3	A	7.3	A
Developing new products (goods or services) and processes	94.7	A	4.3	A	5.7	A	18.9	A	38.2	A	32.9	A
Active involvement in developing new industry-wide standards	82.1	A	21.0	A	26.8	A	25.7	A	15.3	A	11.1	A
Miscellaneous Manufacturing												
Seeking new markets	96.5	A	3.5	A	6.4	A	14.3	A	33.2	B	42.6	B
Satisfying existing clients	99.6	A	1.1	A	1.5	A	1.6	A	15.3	A	80.4	A
Developing niche or specialized markets	93.3	A	4.2	A	6.6	A	19.2	A	36.5	B	33.6	B
Developing export markets	92.5	A	13.5	A	15.8	A	10.2	A	21.9	A	38.6	B
Promoting firm or product (good or service) reputation	98.0	A	2.4	A	1.3	A	10.4	A	20.9	A	65.0	B
Providing after-hour client support services	91.8	A	16.8	A	19.5	A	26.7	A	14.8	A	22.2	A
Hiring new graduates from universities	92.0	A	31.6	A	18.7	A	29.4	B	16.6	A	3.7	A
Hiring new graduates from technical schools and colleges	95.2	A	15.1	A	20.4	A	21.3	A	30.0	B	13.3	A
Hiring experienced employees	99.3	A	2.8	A	11.6	A	16.8	A	41.1	B	27.7	A
Recruiting skilled people from outside of Canada	83.1	A	47.8	B	23.5	B	12.1	A	11.1	A	5.4	A
Training employees	99.3	A	0.9	A	4.7	A	13.6	A	42.4	B	38.5	B
Using teams within your firm which bring together people with different skills	91.3	A	4.9	A	9.3	A	21.8	A	36.9	B	27.0	B
Performing research and development within your firm	95.1	A	14.5	A	12.3	A	18.5	A	19.5	A	35.2	B
Involvement in collaboration and cooperation with other firms	93.1	A	16.7	A	19.6	A	27.2	B	26.5	A	10.1	A
Developing new products (goods or services) and processes	98.6	A	5.6	A	4.2	A	15.6	A	33.5	B	41.0	B
Active involvement in developing new industry-wide standards	90.2	A	13.3	A	19.4	A	24.9	B	33.4	B	9.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries												
Seeking new markets	98.5	A	1.8	A	4.9	A	15.1	A	36.2	A	42.0	A
Satisfying existing clients	99.5	A	0.2	A	0.3	A	2.0	A	16.7	A	80.8	A
Developing niche or specialized markets	97.0	A	1.5	A	5.9	A	18.5	A	37.1	A	37.1	A
Developing export markets	95.6	A	7.6	A	9.8	A	17.4	A	28.9	A	36.3	A
Promoting firm or product (good or service) reputation	99.0	A	0.8	A	2.7	A	11.8	A	31.9	A	52.7	A
Providing after-hour client support services	91.5	A	11.0	A	18.2	A	24.6	A	23.9	A	22.3	A
Hiring new graduates from universities	93.6	A	18.1	A	25.2	A	32.4	A	18.6	A	5.8	A
Hiring new graduates from technical schools and colleges	96.1	A	8.8	A	18.1	A	30.5	A	30.8	A	11.8	A
Hiring experienced employees	98.9	A	1.9	A	6.8	A	20.1	A	44.4	A	26.8	A
Recruiting skilled people from outside of Canada	84.3	A	47.9	A	26.7	A	14.9	A	6.6	A	3.8	A
Training employees	99.4	A	0.6	A	2.7	A	14.3	A	41.0	A	41.4	A
Using teams within your firm which bring together people with different skills	94.0	A	4.7	A	9.0	A	24.9	A	35.0	A	26.4	A
Performing research and development within your firm	95.2	A	5.3	A	12.0	A	20.7	A	30.3	A	31.7	A
Involvement in collaboration and cooperation with other firms	92.5	A	13.4	A	20.4	A	30.3	A	25.3	A	10.7	A
Developing new products (goods or services) and processes	97.0	A	2.3	A	6.5	A	16.7	A	36.2	A	38.2	A
Active involvement in developing new industry-wide standards	92.5	A	12.8	A	20.9	A	29.4	A	24.2	A	12.7	A
Food Manufacturing												
Seeking new markets	97.9	A	2.6	A	3.7	A	13.6	A	33.3	A	46.8	A
Satisfying existing clients	98.8	A	0.0	A	0.3	A	3.0	A	19.9	A	76.8	A
Developing niche or specialized markets	96.8	A	1.0	A	10.7	A	20.6	A	33.4	A	34.2	A
Developing export markets	95.1	A	9.5	A	14.2	A	17.6	A	26.5	A	32.2	A
Promoting firm or product (good or service) reputation	99.1	A	0.4	A	2.2	A	12.3	A	33.5	A	51.6	A
Providing after-hour client support services	90.6	A	10.3	A	19.7	A	24.9	A	27.8	A	17.3	A
Hiring new graduates from universities	94.7	A	17.2	A	21.9	A	37.0	A	17.4	A	6.5	A
Hiring new graduates from technical schools and colleges	94.5	A	11.7	A	20.7	A	32.9	A	26.0	A	8.7	A
Hiring experienced employees	98.8	A	1.4	A	7.2	A	24.0	A	46.2	A	21.2	A
Recruiting skilled people from outside of Canada	83.8	A	54.1	A	23.1	A	14.6	A	6.4	A	1.8	A
Training employees	99.4	A	0.6	A	1.2	A	13.2	A	39.0	A	46.0	A
Using teams within your firm which bring together people with different skills	95.6	A	4.3	A	9.9	A	22.9	A	37.0	A	25.8	A
Performing research and development within your firm	96.3	A	4.5	A	11.2	A	17.4	A	33.0	A	34.0	A
Involvement in collaboration and cooperation with other firms	94.1	A	12.5	A	21.9	A	31.2	A	22.1	A	12.4	A
Developing new products (goods or services) and processes	97.3	A	1.2	A	3.9	A	17.2	A	36.7	A	41.0	A
Active involvement in developing new industry-wide standards	95.7	A	9.2	A	14.3	A	31.2	A	27.9	A	17.3	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Beverage and Tobacco Product Manufacturing												
Seeking new markets	100.0	A	1.4	A	4.3	A	16.5	A	35.1	A	42.6	A
Satisfying existing clients	100.0	A	0.0	A	0.0	A	0.0	A	22.6	A	77.4	A
Developing niche or specialized markets	98.2	A	1.4	A	7.5	A	18.0	A	42.5	A	30.5	A
Developing export markets	96.9	A	15.7	A	11.3	A	24.5	A	17.9	A	30.6	A
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	0.0	A	9.0	A	32.0	A	59.1	A
Providing after-hour client support services	88.9	A	1.5	A	16.7	A	25.2	A	34.6	A	22.0	A
Hiring new graduates from universities	94.2	A	18.5	A	12.5	A	39.8	A	19.9	A	9.2	A
Hiring new graduates from technical schools and colleges	94.4	A	10.2	A	11.4	A	35.7	A	36.6	A	6.2	A
Hiring experienced employees	98.2	A	5.3	A	11.6	A	21.0	A	40.5	A	21.6	A
Recruiting skilled people from outside of Canada	82.6	A	43.0	B	30.3	A	13.9	A	5.3	A	7.5	A
Training employees	100.0	A	4.6	A	1.5	A	7.8	A	42.5	A	43.5	A
Using teams within your firm which bring together people with different skills	95.9	A	9.4	A	3.1	A	18.9	A	40.0	A	28.6	A
Performing research and development within your firm	98.6	A	8.0	A	16.5	A	20.7	A	26.4	A	28.4	A
Involvement in collaboration and cooperation with other firms	94.4	A	16.6	A	19.4	A	41.3	A	16.6	A	6.1	A
Developing new products (goods or services) and processes	97.1	A	8.0	A	5.8	A	20.7	A	38.3	A	27.2	A
Active involvement in developing new industry-wide standards	97.0	A	6.0	A	30.7	A	21.7	A	28.2	A	13.4	A
Textile Mills												
Seeking new markets	96.9	A	3.8	A	5.2	A	16.3	A	32.6	A	42.0	A
Satisfying existing clients	97.7	A	0.8	A	0.0	A	1.6	A	16.9	A	80.7	A
Developing niche or specialized markets	95.3	A	0.0	A	5.4	A	14.2	A	31.2	A	49.2	A
Developing export markets	91.1	A	3.3	A	5.6	A	14.3	A	29.3	A	47.5	A
Promoting firm or product (good or service) reputation	97.7	A	0.0	A	1.5	A	11.4	A	25.2	A	61.9	A
Providing after-hour client support services	93.3	A	11.3	A	13.7	A	27.1	A	33.1	A	14.9	A
Hiring new graduates from universities	95.4	A	14.0	A	16.2	A	45.9	A	21.7	A	2.2	A
Hiring new graduates from technical schools and colleges	96.9	A	10.6	A	13.7	A	27.0	A	32.6	A	16.1	A
Hiring experienced employees	98.4	A	2.2	A	8.4	A	17.7	A	46.6	A	25.1	A
Recruiting skilled people from outside of Canada	87.9	A	44.0	A	19.5	A	17.6	A	12.9	A	6.1	A
Training employees	97.7	A	0.0	A	0.8	A	7.0	A	38.1	A	54.2	A
Using teams within your firm which bring together people with different skills	91.2	A	5.1	A	7.3	A	25.9	A	32.7	A	29.0	A
Performing research and development within your firm	98.4	A	2.5	A	2.2	A	20.4	A	23.1	A	51.8	A
Involvement in collaboration and cooperation with other firms	96.2	A	7.6	A	20.2	A	33.0	A	28.7	A	10.5	A
Developing new products (goods or services) and processes	98.4	A	1.5	A	3.1	A	10.9	A	28.6	A	56.0	A
Active involvement in developing new industry-wide standards	94.7	A	9.3	A	19.4	A	36.3	A	19.5	A	15.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Textile Product Mills												
Seeking new markets	99.1	A	0.0	A	4.1	B	11.5	A	30.2	B	54.2	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	0.9	A	22.7	B	76.3	B
Developing niche or specialized markets	94.2	A	0.0	A	1.0	A	21.9	B	31.8	B	45.3	B
Developing export markets	95.1	A	3.9	A	9.1	B	21.5	B	23.8	B	41.7	B
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	0.9	A	14.6	A	31.8	B	52.7	B
Providing after-hour client support services	83.0	A	19.6	B	22.5	B	22.8	B	27.4	B	7.7	A
Hiring new graduates from universities	88.5	A	36.3	B	16.6	B	34.2	B	12.9	A	0.0	A
Hiring new graduates from technical schools and colleges	91.6	A	22.2	B	28.2	B	28.8	B	18.8	B	2.0	A
Hiring experienced employees	99.1	A	3.6	A	8.5	B	16.9	B	50.3	B	20.7	B
Recruiting skilled people from outside of Canada	87.0	A	54.9	B	27.2	B	13.1	B	1.1	A	3.8	A
Training employees	98.2	A	0.0	A	5.4	A	15.0	B	50.2	B	29.4	B
Using teams within your firm which bring together people with different skills	98.2	A	7.0	A	20.6	B	22.1	B	32.2	B	18.2	B
Performing research and development within your firm	98.1	A	3.4	A	20.0	B	14.3	A	37.1	B	25.2	B
Involvement in collaboration and cooperation with other firms	96.7	A	14.4	B	18.1	B	46.0	B	15.3	B	6.2	A
Developing new products (goods or services) and processes	98.1	A	0.0	A	2.5	A	13.1	B	41.4	B	43.0	B
Active involvement in developing new industry-wide standards	90.8	A	13.7	B	28.6	B	22.4	B	29.1	B	6.2	A
Clothing Manufacturing												
Seeking new markets	99.4	A	0.3	A	1.5	A	16.0	A	29.0	A	53.2	A
Satisfying existing clients	99.7	A	0.0	A	1.1	A	5.3	A	15.9	A	77.7	A
Developing niche or specialized markets	92.8	A	1.6	A	4.2	A	15.3	A	37.2	A	41.8	A
Developing export markets	93.7	A	2.9	A	5.6	A	14.1	A	26.7	A	50.7	A
Promoting firm or product (good or service) reputation	96.9	A	0.6	A	2.7	A	12.7	A	29.6	A	54.4	A
Providing after-hour client support services	82.5	A	23.1	A	21.1	A	24.2	A	20.7	A	10.9	A
Hiring new graduates from universities	86.6	A	30.6	A	29.2	A	29.8	A	9.3	A	1.0	A
Hiring new graduates from technical schools and colleges	90.1	A	17.6	A	22.4	A	37.1	A	16.3	A	6.6	A
Hiring experienced employees	97.8	A	2.6	A	2.1	A	17.3	A	45.5	A	32.5	A
Recruiting skilled people from outside of Canada	76.6	A	42.3	A	18.4	A	20.0	A	11.7	A	7.5	A
Training employees	97.8	A	0.7	A	6.6	A	27.1	A	38.8	A	26.9	A
Using teams within your firm which bring together people with different skills	84.4	A	6.0	A	13.8	A	30.2	A	32.5	A	17.6	A
Performing research and development within your firm	90.2	A	7.4	A	11.2	A	24.7	A	31.2	A	25.6	A
Involvement in collaboration and cooperation with other firms	80.4	A	17.4	A	24.2	A	30.9	A	19.7	A	7.9	A
Developing new products (goods or services) and processes	96.4	A	1.6	A	5.2	A	12.9	A	34.6	A	45.6	A
Active involvement in developing new industry-wide standards	81.7	A	11.9	A	18.6	A	35.0	A	20.0	A	14.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Leather and Allied Product Manufacturing												
Seeking new markets	100.0	A	3.0	A	6.9	A	12.3	B	22.8	B	55.0	B
Satisfying existing clients	100.0	A	0.0	A	1.8	A	0.0	A	18.6	B	79.6	B
Developing niche or specialized markets	100.0	A	0.0	A	0.0	A	6.9	A	41.4	B	51.7	B
Developing export markets	100.0	A	0.0	A	13.5	B	8.7	A	26.1	B	51.7	B
Promoting firm or product (good or service) reputation	100.0	A	10.5	B	3.3	A	14.1	B	30.3	B	41.7	B
Providing after-hour client support services	96.4	A	20.6	B	44.5	B	13.1	B	10.9	B	10.9	A
Hiring new graduates from universities	93.4	A	20.9	B	45.7	B	23.8	B	5.8	A	3.9	A
Hiring new graduates from technical schools and colleges	93.4	A	16.7	B	35.0	B	21.9	B	11.6	B	14.8	B
Hiring experienced employees	100.0	A	5.1	A	15.6	B	15.3	B	41.1	B	22.8	B
Recruiting skilled people from outside of Canada	89.8	B	40.5	B	13.7	B	11.7	B	19.4	B	14.7	B
Training employees	100.0	A	0.0	A	6.9	A	17.4	B	37.5	B	38.1	B
Using teams within your firm which bring together people with different skills	93.1	A	3.9	A	17.4	B	23.5	B	29.4	B	25.8	B
Performing research and development within your firm	100.0	A	1.8	A	0.0	A	29.7	B	19.2	B	49.2	B
Involvement in collaboration and cooperation with other firms	91.3	A	16.8	A	24.3	B	26.3	B	26.6	B	5.9	A
Developing new products (goods or services) and processes	98.2	A	0.0	A	0.0	A	3.7	A	47.7	B	48.6	B
Active involvement in developing new industry-wide standards	91.0	B	9.9	A	36.3	B	20.5	B	14.5	B	18.8	B
Sawmills and Wood Preservation												
Seeking new markets	97.1	A	2.4	A	2.4	A	13.9	A	36.5	A	44.8	A
Satisfying existing clients	99.2	A	0.0	A	0.0	A	4.0	A	20.9	A	75.1	A
Developing niche or specialized markets	96.4	A	2.8	A	2.6	A	16.6	A	39.5	A	38.5	A
Developing export markets	94.8	A	3.1	A	8.2	A	16.6	A	23.6	A	48.4	A
Promoting firm or product (good or service) reputation	98.1	A	0.5	A	2.4	A	17.0	A	30.9	A	49.2	A
Providing after-hour client support services	78.7	A	18.0	A	18.9	A	30.2	A	15.7	A	17.1	A
Hiring new graduates from universities	89.2	A	19.8	A	22.1	A	35.7	A	13.8	A	8.5	A
Hiring new graduates from technical schools and colleges	96.1	A	7.2	A	14.3	A	34.4	A	33.1	A	10.9	A
Hiring experienced employees	99.5	A	0.6	A	2.9	A	14.7	A	54.6	A	27.2	A
Recruiting skilled people from outside of Canada	75.9	A	57.6	A	33.5	A	6.2	A	1.0	A	1.7	A
Training employees	100.0	A	0.5	A	2.1	A	14.0	A	33.5	A	50.0	A
Using teams within your firm which bring together people with different skills	91.2	A	6.6	A	13.3	A	21.2	A	34.6	A	24.3	A
Performing research and development within your firm	91.5	A	11.8	A	15.9	A	26.5	A	26.5	A	19.3	A
Involvement in collaboration and cooperation with other firms	90.5	A	21.4	A	15.1	A	28.4	A	28.1	A	7.1	A
Developing new products (goods or services) and processes	95.8	A	2.9	A	7.2	A	23.4	A	44.1	A	22.4	A
Active involvement in developing new industry-wide standards	90.1	A	10.4	A	19.0	A	30.9	A	26.6	A	13.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Veneer, Plywood and Engineered Wood Product Manufacturing												
Seeking new markets	100.0	A	1.7	A	11.3	A	6.5	A	42.5	B	38.1	B
Satisfying existing clients	100.0	A	1.7	A	0.0	A	2.7	A	16.8	B	78.8	B
Developing niche or specialized markets	95.6	A	0.0	A	6.2	A	14.8	A	34.8	B	44.2	B
Developing export markets	98.5	A	8.8	A	2.8	A	21.7	B	24.1	B	42.7	B
Promoting firm or product (good or service) reputation	98.3	A	1.7	A	3.0	A	5.9	A	25.9	B	63.5	B
Providing after-hour client support services	88.8	A	20.1	B	15.3	A	33.1	B	20.0	B	11.6	A
Hiring new graduates from universities	94.0	A	20.9	A	19.6	A	37.6	B	20.2	A	1.7	A
Hiring new graduates from technical schools and colleges	97.3	A	5.1	A	13.7	A	36.5	B	43.1	B	1.7	A
Hiring experienced employees	97.3	A	1.7	A	6.4	A	23.5	B	51.6	B	16.8	A
Recruiting skilled people from outside of Canada	73.3	B	50.0	B	29.9	B	17.8	B	2.3	A	0.0	A
Training employees	100.0	A	0.0	A	1.7	A	10.4	A	42.2	B	45.8	B
Using teams within your firm which bring together people with different skills	89.7	A	0.0	A	16.7	A	25.4	B	24.5	B	33.4	B
Performing research and development within your firm	92.5	A	3.6	A	14.7	A	23.1	B	34.6	B	23.9	B
Involvement in collaboration and cooperation with other firms	81.9	A	7.7	A	9.1	A	41.1	B	34.9	B	7.2	A
Developing new products (goods or services) and processes	88.4	A	0.0	A	1.8	A	31.0	B	34.0	B	33.1	B
Active involvement in developing new industry-wide standards	88.2	A	5.3	A	14.1	B	33.3	B	28.4	B	18.8	B
Other Wood Product Manufacturing												
Seeking new markets	99.4	A	1.5	A	4.5	A	10.5	A	39.6	A	43.9	A
Satisfying existing clients	100.0	A	0.0	A	0.9	A	3.5	A	22.6	A	73.0	A
Developing niche or specialized markets	98.0	A	1.1	A	10.3	A	29.9	A	36.1	A	22.7	A
Developing export markets	95.3	A	4.9	A	4.6	A	17.5	A	31.9	A	41.1	B
Promoting firm or product (good or service) reputation	97.9	A	0.0	A	4.6	A	13.4	A	30.7	A	51.3	A
Providing after-hour client support services	86.7	A	14.2	A	17.3	A	23.6	A	24.2	A	20.7	A
Hiring new graduates from universities	92.1	A	32.7	A	29.2	A	25.6	A	7.9	A	4.6	A
Hiring new graduates from technical schools and colleges	95.0	A	16.1	A	24.3	A	32.9	A	19.7	A	7.0	A
Hiring experienced employees	100.0	A	2.2	A	8.5	A	26.3	A	38.4	A	24.6	A
Recruiting skilled people from outside of Canada	81.5	A	60.5	B	20.9	A	9.6	A	7.0	A	1.9	A
Training employees	100.0	A	2.7	A	4.1	A	17.8	A	41.1	A	34.3	A
Using teams within your firm which bring together people with different skills	93.9	A	11.1	A	12.5	A	30.3	A	30.4	A	15.8	A
Performing research and development within your firm	97.5	A	3.5	A	22.3	A	29.8	A	28.0	A	16.3	A
Involvement in collaboration and cooperation with other firms	92.3	A	15.0	A	26.3	A	33.8	A	20.5	A	4.3	A
Developing new products (goods or services) and processes	98.4	A	5.1	A	14.3	A	28.5	A	28.3	A	23.7	A
Active involvement in developing new industry-wide standards	88.5	A	22.9	A	22.5	A	19.4	A	26.5	A	8.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Paper Manufacturing												
Seeking new markets	98.2	A	4.4	A	1.6	A	17.5	A	34.5	A	41.9	A
Satisfying existing clients	99.5	A	0.0	A	0.9	A	0.5	A	13.8	A	84.9	A
Developing niche or specialized markets	99.1	A	2.8	A	6.5	A	14.7	A	31.1	A	44.9	A
Developing export markets	97.3	A	11.2	A	8.2	A	19.7	A	29.8	A	31.1	A
Promoting firm or product (good or service) reputation	99.5	A	1.2	A	4.9	A	14.2	A	32.7	A	47.0	A
Providing after-hour client support services	95.6	A	12.9	A	15.4	A	25.0	A	28.8	A	17.9	A
Hiring new graduates from universities	98.8	A	15.6	A	23.9	A	36.0	A	17.4	A	7.2	A
Hiring new graduates from technical schools and colleges	99.3	A	9.0	A	17.7	A	33.0	A	30.3	A	10.0	A
Hiring experienced employees	99.5	A	2.8	A	6.9	A	31.9	A	41.9	A	16.5	A
Recruiting skilled people from outside of Canada	88.9	A	57.5	A	31.2	A	9.9	A	1.0	A	0.5	A
Training employees	100.0	A	0.0	A	1.6	A	9.8	A	38.4	A	50.1	A
Using teams within your firm which bring together people with different skills	99.1	A	3.3	A	7.7	A	21.9	A	42.1	A	25.0	A
Performing research and development within your firm	97.9	A	7.7	A	15.9	A	25.2	A	32.3	A	18.9	A
Involvement in collaboration and cooperation with other firms	93.0	A	16.9	A	15.4	A	38.5	A	24.3	A	5.0	A
Developing new products (goods or services) and processes	98.6	A	7.8	A	7.9	A	22.4	A	33.7	A	28.2	A
Active involvement in developing new industry-wide standards	96.3	A	15.8	A	24.3	A	34.5	A	16.9	A	8.5	A
Printing and Related Support Activities												
Seeking new markets	98.3	A	0.0	A	3.3	A	17.0	A	40.4	B	39.3	B
Satisfying existing clients	99.5	A	0.0	A	0.0	A	0.0	A	14.7	A	85.3	A
Developing niche or specialized markets	97.5	A	0.3	A	2.8	A	14.6	A	40.3	B	42.0	B
Developing export markets	92.4	A	13.1	A	11.5	A	23.0	A	25.9	B	26.4	B
Promoting firm or product (good or service) reputation	98.7	A	0.0	A	3.7	A	14.3	A	28.5	B	53.4	B
Providing after-hour client support services	96.5	A	6.1	A	17.4	A	23.0	A	17.8	A	35.7	B
Hiring new graduates from universities	93.5	A	21.9	A	32.0	B	32.0	B	10.1	A	4.0	A
Hiring new graduates from technical schools and colleges	97.5	A	6.6	A	21.7	A	29.8	B	28.7	A	13.2	A
Hiring experienced employees	99.5	A	0.8	A	3.8	A	14.3	A	42.7	B	38.4	B
Recruiting skilled people from outside of Canada	83.4	A	61.3	B	24.2	B	9.5	A	2.0	A	2.9	A
Training employees	99.2	A	0.8	A	3.9	A	11.6	A	39.1	B	44.6	B
Using teams within your firm which bring together people with different skills	93.9	A	7.1	A	5.6	A	26.6	B	31.0	B	29.6	B
Performing research and development within your firm	92.2	A	12.3	A	17.3	A	22.7	A	32.4	B	15.3	A
Involvement in collaboration and cooperation with other firms	93.3	A	17.2	A	20.8	A	28.8	B	20.8	A	12.4	A
Developing new products (goods or services) and processes	97.5	A	3.0	A	13.0	A	21.6	A	33.3	B	29.1	B
Active involvement in developing new industry-wide standards	94.1	A	18.0	A	23.9	A	35.8	B	13.6	A	8.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing												
Seeking new markets	97.6	A	0.0	A	0.0	A	27.5	A	40.0	A	32.5	A
Satisfying existing clients	100.0	A	0.0	A	0.0	A	0.0	A	22.0	A	78.0	A
Developing niche or specialized markets	97.6	A	0.0	A	10.0	A	15.0	A	50.0	A	25.0	A
Developing export markets	92.7	A	10.5	A	18.4	A	21.1	A	26.3	A	23.7	A
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	0.0	A	9.8	A	39.0	A	51.2	A
Providing after-hour client support services	95.1	A	2.6	A	17.9	A	33.3	A	33.3	A	12.8	A
Hiring new graduates from universities	97.6	A	2.5	A	20.0	A	32.5	A	25.0	A	20.0	A
Hiring new graduates from technical schools and colleges	100.0	A	2.4	A	7.3	A	46.3	A	31.7	A	12.2	A
Hiring experienced employees	97.6	A	0.0	A	7.5	A	40.0	A	30.0	A	22.5	A
Recruiting skilled people from outside of Canada	82.9	A	50.0	A	29.4	A	20.6	A	0.0	A	0.0	A
Training employees	100.0	A	0.0	A	4.9	A	2.4	A	43.9	A	48.8	A
Using teams within your firm which bring together people with different skills	100.0	A	2.4	A	7.3	A	14.6	A	36.6	A	39.0	A
Performing research and development within your firm	100.0	A	7.3	A	17.1	A	12.2	A	31.7	A	31.7	A
Involvement in collaboration and cooperation with other firms	100.0	A	2.4	A	12.2	A	36.6	A	31.7	A	17.1	A
Developing new products (goods or services) and processes	92.7	A	2.6	A	10.5	A	15.8	A	44.7	A	26.3	A
Active involvement in developing new industry-wide standards	100.0	A	4.9	A	7.3	A	34.1	A	41.5	A	12.2	A
Chemical Manufacturing (excluding 3254)												
Seeking new markets	99.3	A	0.5	A	4.7	A	17.8	A	35.6	A	41.3	A
Satisfying existing clients	99.6	A	0.5	A	0.3	A	1.4	A	19.3	A	78.5	A
Developing niche or specialized markets	99.1	A	1.5	A	4.0	A	17.4	A	44.1	A	32.9	A
Developing export markets	95.9	A	12.1	A	11.6	A	25.3	A	24.5	A	26.4	A
Promoting firm or product (good or service) reputation	99.6	A	0.7	A	3.8	A	13.0	A	37.2	A	45.3	A
Providing after-hour client support services	94.1	A	6.5	A	17.5	A	26.3	A	28.6	A	21.1	A
Hiring new graduates from universities	97.8	A	8.4	A	23.6	A	34.7	A	26.1	A	7.2	A
Hiring new graduates from technical schools and colleges	98.4	A	6.4	A	20.3	A	33.0	A	31.8	A	8.5	A
Hiring experienced employees	98.7	A	2.4	A	12.6	A	21.8	A	47.2	A	16.0	A
Recruiting skilled people from outside of Canada	88.1	A	50.5	A	31.9	A	12.7	A	4.2	A	0.8	A
Training employees	100.0	A	0.6	A	1.7	A	13.0	A	39.0	A	45.8	A
Using teams within your firm which bring together people with different skills	96.1	A	5.8	A	3.6	A	21.1	A	38.0	A	31.4	A
Performing research and development within your firm	98.2	A	1.6	A	11.6	A	16.8	A	26.8	A	43.1	A
Involvement in collaboration and cooperation with other firms	92.6	A	10.7	A	19.1	A	27.7	A	34.1	A	8.4	A
Developing new products (goods or services) and processes	98.7	A	1.2	A	3.8	A	12.7	A	39.0	A	43.4	A
Active involvement in developing new industry-wide standards	95.0	A	6.4	A	19.8	A	30.7	A	29.5	A	13.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Pharmaceutical and Medicine Manufacturing (3254)												
Seeking new markets	100.0	A	1.9	A	0.0	A	9.2	A	40.2	B	48.7	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	0.0	A	17.9	A	82.1	A
Developing niche or specialized markets	100.0	A	1.9	A	7.5	A	20.2	A	37.6	B	32.9	B
Developing export markets	94.4	A	11.5	A	18.0	B	12.7	A	22.5	A	35.4	B
Promoting firm or product (good or service) reputation	100.0	A	5.0	A	2.1	A	17.5	A	35.4	B	40.0	B
Providing after-hour client support services	92.6	A	11.4	A	14.9	A	28.7	B	24.6	B	20.3	A
Hiring new graduates from universities	100.0	A	3.7	A	30.1	A	37.3	B	23.0	B	5.8	A
Hiring new graduates from technical schools and colleges	100.0	A	7.1	A	30.3	A	27.8	B	26.0	A	8.7	A
Hiring experienced employees	100.0	A	0.0	A	3.7	A	17.5	A	58.7	B	20.1	A
Recruiting skilled people from outside of Canada	92.9	A	37.6	B	26.5	B	21.7	A	14.2	A	0.0	A
Training employees	100.0	A	0.0	A	0.0	A	15.1	A	36.4	B	48.5	B
Using teams within your firm which bring together people with different skills	92.6	A	2.0	A	2.0	A	22.0	A	38.8	B	35.2	B
Performing research and development within your firm	98.1	A	1.9	A	7.2	A	15.6	A	22.7	A	52.6	B
Involvement in collaboration and cooperation with other firms	87.9	A	7.8	A	17.4	A	22.6	A	34.3	B	17.8	A
Developing new products (goods or services) and processes	92.1	A	2.0	A	2.3	A	2.0	A	36.5	B	57.1	B
Active involvement in developing new industry-wide standards	91.3	A	13.3	A	27.2	B	21.3	A	26.7	A	11.5	A
Plastics and Rubber Products Manufacturing												
Seeking new markets	98.8	A	1.6	A	3.3	A	13.0	A	39.1	A	43.0	A
Satisfying existing clients	100.0	A	0.7	A	0.4	A	3.2	A	13.0	A	82.7	A
Developing niche or specialized markets	98.5	A	2.5	A	4.8	A	16.3	A	37.1	A	39.4	A
Developing export markets	98.2	A	5.1	A	8.9	A	17.7	A	35.1	A	33.2	A
Promoting firm or product (good or service) reputation	99.3	A	0.7	A	3.7	A	11.9	A	30.8	A	52.9	A
Providing after-hour client support services	90.3	A	8.1	A	19.7	A	29.4	A	24.6	A	18.2	A
Hiring new graduates from universities	93.7	A	18.7	A	24.5	A	30.5	A	16.8	A	9.4	A
Hiring new graduates from technical schools and colleges	96.4	A	9.6	A	14.8	A	30.0	A	32.7	A	12.9	A
Hiring experienced employees	98.6	A	2.9	A	9.3	A	19.7	A	43.2	A	24.9	A
Recruiting skilled people from outside of Canada	86.7	A	49.6	A	27.5	A	15.1	A	5.9	A	1.9	A
Training employees	99.8	A	0.8	A	3.7	A	11.7	A	34.3	A	49.4	A
Using teams within your firm which bring together people with different skills	96.1	A	3.7	A	10.0	A	17.1	A	38.4	A	30.7	A
Performing research and development within your firm	96.8	A	2.3	A	7.5	A	17.6	A	30.5	A	42.0	A
Involvement in collaboration and cooperation with other firms	93.7	A	14.2	A	17.6	A	28.5	A	23.0	A	16.7	A
Developing new products (goods or services) and processes	98.5	A	0.0	A	4.5	A	11.4	A	37.0	A	47.2	A
Active involvement in developing new industry-wide standards	94.4	A	13.0	A	22.6	A	30.4	A	21.4	A	12.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Non-Metallic Mineral Products Manufacturing												
Seeking new markets	98.2	A	2.0	A	7.5	A	19.6	A	28.6	A	42.3	A
Satisfying existing clients	100.0	A	0.5	A	0.0	A	1.5	A	13.6	A	84.4	A
Developing niche or specialized markets	94.6	A	2.3	A	5.7	A	21.9	A	33.2	A	36.9	A
Developing export markets	87.3	A	18.7	A	13.9	A	17.7	A	19.6	A	30.0	A
Promoting firm or product (good or service) reputation	98.9	A	0.6	A	1.2	A	14.7	A	25.3	A	58.2	A
Providing after-hour client support services	93.7	A	13.3	A	17.5	A	17.4	A	24.2	A	27.5	A
Hiring new graduates from universities	93.3	A	25.4	A	24.4	A	22.0	A	19.3	A	9.0	A
Hiring new graduates from technical schools and colleges	95.1	A	17.7	A	19.4	A	27.5	A	22.7	A	12.7	A
Hiring experienced employees	98.7	A	3.7	A	11.5	A	23.7	A	35.2	A	25.9	A
Recruiting skilled people from outside of Canada	75.9	A	59.5	B	20.3	A	7.7	A	7.2	A	5.4	A
Training employees	100.0	A	0.0	A	4.5	A	15.4	A	35.8	A	44.3	A
Using teams within your firm which bring together people with different skills	92.1	A	8.4	A	14.8	A	23.4	A	26.3	A	27.2	A
Performing research and development within your firm	93.8	A	6.0	A	12.5	A	28.2	A	31.1	A	22.3	A
Involvement in collaboration and cooperation with other firms	91.0	A	19.0	A	18.9	A	30.1	A	23.5	A	8.5	A
Developing new products (goods or services) and processes	97.3	A	1.5	A	8.5	A	23.4	A	26.6	A	40.1	A
Active involvement in developing new industry-wide standards	96.0	A	19.4	A	14.1	A	23.2	A	27.6	A	15.7	A
Primary Metal Manufacturing												
Seeking new markets	99.4	A	3.7	A	4.5	A	16.7	A	42.0	A	33.1	A
Satisfying existing clients	99.4	A	0.0	A	0.0	A	1.3	A	12.4	A	86.3	A
Developing niche or specialized markets	96.6	A	1.6	A	5.1	A	14.0	A	44.7	A	34.6	A
Developing export markets	98.7	A	12.6	A	7.6	A	13.5	A	34.6	A	31.6	A
Promoting firm or product (good or service) reputation	99.4	A	1.5	A	6.2	A	11.5	A	37.9	A	42.8	A
Providing after-hour client support services	91.7	A	14.9	A	26.3	A	25.0	A	17.7	A	16.1	A
Hiring new graduates from universities	96.7	A	19.2	A	19.4	A	28.4	A	22.5	A	10.5	A
Hiring new graduates from technical schools and colleges	97.3	A	8.0	A	18.4	A	27.9	A	32.4	A	13.3	A
Hiring experienced employees	99.4	A	2.2	A	8.0	A	26.3	A	45.3	A	18.3	A
Recruiting skilled people from outside of Canada	89.0	A	47.7	A	27.1	A	15.9	A	6.2	A	3.2	A
Training employees	100.0	A	0.9	A	0.6	A	10.2	A	41.9	A	46.4	A
Using teams within your firm which bring together people with different skills	97.2	A	2.2	A	5.3	A	22.0	A	36.5	A	33.9	A
Performing research and development within your firm	96.9	A	2.1	A	11.5	A	21.3	A	45.4	A	19.6	A
Involvement in collaboration and cooperation with other firms	92.7	A	18.0	A	22.1	A	24.9	A	24.6	A	10.4	A
Developing new products (goods or services) and processes	96.3	A	4.1	A	7.4	A	26.2	A	36.6	A	25.7	A
Active involvement in developing new industry-wide standards	90.2	A	18.1	A	16.4	A	28.4	A	28.0	A	9.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing												
Seeking new markets	99.4	A	2.1	A	6.5	A	19.2	A	38.1	A	34.1	A
Satisfying existing clients	99.8	A	0.3	A	0.3	A	1.5	A	14.5	A	83.5	A
Developing niche or specialized markets	97.7	A	2.1	A	8.4	A	22.6	A	30.7	A	36.2	A
Developing export markets	95.3	A	8.6	A	10.4	A	16.3	A	28.6	A	36.1	A
Promoting firm or product (good or service) reputation	99.8	A	0.6	A	2.3	A	10.5	A	33.6	A	53.0	A
Providing after-hour client support services	91.4	A	13.1	A	14.6	A	25.3	A	22.6	A	24.4	A
Hiring new graduates from universities	91.5	A	17.1	A	27.5	A	35.2	A	17.5	A	2.6	A
Hiring new graduates from technical schools and colleges	95.7	A	7.0	A	15.7	A	33.3	A	31.0	A	13.0	A
Hiring experienced employees	99.2	A	1.0	A	5.9	A	21.1	A	41.2	A	30.8	A
Recruiting skilled people from outside of Canada	81.8	A	46.1	B	27.5	A	16.7	A	4.3	A	5.4	A
Training employees	99.7	A	0.4	A	3.3	A	16.7	A	44.8	A	34.8	A
Using teams within your firm which bring together people with different skills	94.0	A	2.5	A	9.0	A	33.2	A	35.3	A	20.0	A
Performing research and development within your firm	91.7	A	8.7	A	16.1	A	23.6	A	26.6	A	25.0	A
Involvement in collaboration and cooperation with other firms	92.6	A	15.0	A	20.0	A	34.6	A	19.5	A	10.9	A
Developing new products (goods or services) and processes	95.3	A	5.2	A	9.1	A	21.5	A	36.2	A	28.0	A
Active involvement in developing new industry-wide standards	92.3	A	17.0	A	17.0	A	32.2	A	23.2	A	10.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)												
Seeking new markets	98.2	A	2.3	A	3.8	A	12.6	A	34.5	A	46.9	A
Satisfying existing clients	100.0	A	0.0	A	0.0	A	1.7	A	16.0	A	82.3	A
Developing niche or specialized markets	97.5	A	0.6	A	4.0	A	16.7	A	48.4	A	30.4	A
Developing export markets	98.8	A	0.6	A	6.4	A	10.4	A	36.2	A	46.4	A
Promoting firm or product (good or service) reputation	100.0	A	0.5	A	1.0	A	6.7	A	32.5	A	59.2	A
Providing after-hour client support services	98.2	A	2.5	A	15.4	A	22.1	A	26.7	A	33.3	A
Hiring new graduates from universities	98.3	A	13.9	A	20.9	A	39.1	A	19.4	A	6.7	A
Hiring new graduates from technical schools and colleges	100.0	A	1.2	A	18.2	A	36.8	A	31.6	A	12.2	A
Hiring experienced employees	100.0	A	0.0	A	3.6	A	14.8	A	55.3	A	26.3	A
Recruiting skilled people from outside of Canada	88.9	A	42.1	A	29.0	A	19.8	A	5.4	A	3.6	A
Training employees	100.0	A	0.0	A	2.3	A	19.6	A	44.0	A	34.1	A
Using teams within your firm which bring together people with different skills	96.2	A	4.8	A	10.4	A	24.9	A	40.5	A	19.4	A
Performing research and development within your firm	99.0	A	1.0	A	6.8	A	14.8	A	25.1	A	52.3	A
Involvement in collaboration and cooperation with other firms	96.6	A	9.1	A	15.6	A	26.8	A	35.6	A	13.0	A
Developing new products (goods or services) and processes	99.5	A	0.0	A	3.9	A	11.2	A	33.5	A	51.3	A
Active involvement in developing new industry-wide standards	93.8	A	14.7	A	28.9	A	26.8	A	21.5	A	8.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4

Firm Success Factors

Industry by Factor

Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)												
Seeking new markets	98.9	A	0.5	A	7.4	A	15.8	A	35.0	A	41.2	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	3.4	A	21.4	A	75.2	A
Developing niche or specialized markets	98.2	A	0.7	A	4.3	A	14.8	A	41.2	B	39.0	B
Developing export markets	97.6	A	3.2	A	8.2	A	18.4	A	33.5	A	36.8	B
Promoting firm or product (good or service) reputation	99.3	A	1.7	A	3.6	A	14.0	A	32.4	A	48.3	B
Providing after-hour client support services	93.9	A	5.6	A	16.4	A	22.9	A	23.2	A	31.8	A
Hiring new graduates from universities	93.5	A	13.5	A	24.3	A	34.3	B	22.8	A	5.2	A
Hiring new graduates from technical schools and colleges	96.1	A	4.5	A	9.8	A	26.6	A	40.2	B	18.9	A
Hiring experienced employees	99.0	A	2.7	A	3.8	A	16.0	A	46.1	B	31.3	A
Recruiting skilled people from outside of Canada	86.3	A	34.8	B	33.9	B	19.7	A	8.2	A	3.5	A
Training employees	100.0	A	0.7	A	1.2	A	15.1	A	44.8	B	38.3	A
Using teams within your firm which bring together people with different skills	96.2	A	3.3	A	10.7	A	24.2	A	36.1	B	25.6	A
Performing research and development within your firm	97.8	A	0.7	A	9.5	A	17.5	A	39.9	B	32.4	A
Involvement in collaboration and cooperation with other firms	96.5	A	7.2	A	19.7	A	32.0	A	30.4	A	10.7	A
Developing new products (goods or services) and processes	96.3	A	1.2	A	5.6	A	13.9	A	39.9	B	39.4	B
Active involvement in developing new industry-wide standards	93.9	A	9.0	A	25.1	A	30.3	A	24.8	A	10.8	A
Computer and Peripheral Equipment Manufacturing												
Seeking new markets	97.7	A	0.0	A	17.9	A	14.1	B	22.2	B	45.8	B
Satisfying existing clients	97.7	A	5.8	B	0.0	A	2.4	A	7.1	A	84.7	B
Developing niche or specialized markets	97.7	A	0.0	A	0.0	A	5.4	A	35.5	B	59.1	B
Developing export markets	97.7	A	9.5	A	8.5	B	15.7	B	18.3	B	48.0	B
Promoting firm or product (good or service) reputation	97.7	A	2.4	A	7.5	A	8.3	A	32.5	B	49.2	B
Providing after-hour client support services	90.7	A	8.3	A	26.7	B	17.5	B	10.7	A	36.8	B
Hiring new graduates from universities	97.7	A	15.5	A	28.8	B	10.7	B	19.6	A	25.4	B
Hiring new graduates from technical schools and colleges	100.0	A	12.0	A	23.8	B	17.1	B	17.2	B	29.8	B
Hiring experienced employees	100.0	A	2.3	A	2.3	A	10.9	B	47.1	B	37.4	B
Recruiting skilled people from outside of Canada	97.7	A	31.0	B	29.4	B	19.8	B	7.9	B	11.9	A
Training employees	100.0	A	0.0	A	0.0	A	17.4	A	35.5	B	47.1	B
Using teams within your firm which bring together people with different skills	100.0	A	8.1	A	9.3	A	22.7	B	26.0	B	33.9	B
Performing research and development within your firm	100.0	A	13.4	B	4.7	A	10.3	B	17.8	B	53.9	B
Involvement in collaboration and cooperation with other firms	97.1	A	13.0	B	13.2	A	10.4	B	46.7	B	16.8	A
Developing new products (goods or services) and processes	100.0	A	2.3	A	8.1	A	4.7	A	30.6	B	54.3	B
Active involvement in developing new industry-wide standards	97.3	A	16.1	B	19.5	B	20.3	B	17.7	B	26.3	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Communications Equipment Manufacturing												
Seeking new markets	100.0	A	1.7	A	5.1	A	10.2	A	26.8	B	56.2	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	0.0	A	25.7	B	74.3	B
Developing niche or specialized markets	100.0	A	0.0	A	1.7	A	21.0	A	39.2	B	38.2	B
Developing export markets	100.0	A	4.3	A	3.3	A	18.2	B	33.6	B	40.6	B
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	1.8	A	8.7	A	47.3	B	42.1	B
Providing after-hour client support services	94.9	A	5.2	A	15.7	B	27.7	A	32.6	B	18.7	A
Hiring new graduates from universities	98.3	A	5.5	A	17.0	B	19.4	A	51.4	B	6.7	A
Hiring new graduates from technical schools and colleges	100.0	A	5.4	A	7.1	A	22.0	B	55.6	B	9.9	A
Hiring experienced employees	100.0	A	1.7	A	1.7	A	29.0	B	55.7	B	12.0	A
Recruiting skilled people from outside of Canada	94.9	A	31.0	B	42.2	B	14.1	A	10.9	A	1.7	A
Training employees	100.0	A	0.0	A	3.3	A	13.0	A	55.1	B	28.6	B
Using teams within your firm which bring together people with different skills	96.6	A	0.0	A	1.7	A	46.8	B	27.5	B	24.0	B
Performing research and development within your firm	100.0	A	1.7	A	10.2	A	3.9	A	24.3	B	59.9	B
Involvement in collaboration and cooperation with other firms	98.2	A	3.4	A	19.7	A	29.3	B	29.3	B	18.4	B
Developing new products (goods or services) and processes	98.3	A	0.0	A	3.4	A	7.8	A	23.7	A	65.1	B
Active involvement in developing new industry-wide standards	96.7	A	8.7	A	23.5	B	25.9	A	31.1	B	10.8	B
Audio and Video Equipment Manufacturing												
Seeking new markets	x	A	x	A	x	A	x	A	x	A	x	A
Satisfying existing clients	x	A	x	A	x	A	x	A	x	A	x	A
Developing niche or specialized markets	x	A	x	A	x	A	x	A	x	A	x	A
Developing export markets	x	A	x	A	x	A	x	A	x	A	x	A
Promoting firm or product (good or service) reputation	x	A	x	A	x	A	x	A	x	A	x	A
Providing after-hour client support services	x	A	x	A	x	A	x	A	x	A	x	A
Hiring new graduates from universities	x	A	x	A	x	A	x	A	x	A	x	A
Hiring new graduates from technical schools and colleges	x	A	x	A	x	A	x	A	x	A	x	A
Hiring experienced employees	x	A	x	A	x	A	x	A	x	A	x	A
Recruiting skilled people from outside of Canada	x	A	x	A	x	A	x	A	x	A	x	A
Training employees	x	A	x	A	x	A	x	A	x	A	x	A
Using teams within your firm which bring together people with different skills	x	A	x	A	x	A	x	A	x	A	x	A
Performing research and development within your firm	x	A	x	A	x	A	x	A	x	A	x	A
Involvement in collaboration and cooperation with other firms	x	A	x	A	x	A	x	A	x	A	x	A
Developing new products (goods or services) and processes	x	A	x	A	x	A	x	A	x	A	x	A
Active involvement in developing new industry-wide standards	x	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing												
Seeking new markets	100.0	A	0.0	A	2.3	A	8.7	A	45.0	B	44.0	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	0.0	A	20.7	A	79.3	A
Developing niche or specialized markets	100.0	A	0.0	A	2.3	A	15.5	A	43.7	B	38.6	B
Developing export markets	97.7	A	0.0	A	4.5	A	23.7	B	33.4	B	38.4	B
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	2.3	A	18.7	A	26.2	B	52.8	B
Providing after-hour client support services	93.3	A	13.0	A	9.5	A	27.1	B	26.9	B	23.5	B
Hiring new graduates from universities	100.0	A	11.0	A	25.1	A	23.0	B	21.0	B	19.9	B
Hiring new graduates from technical schools and colleges	100.0	A	6.6	A	21.0	A	24.3	A	31.7	B	16.4	A
Hiring experienced employees	100.0	A	2.2	A	2.2	A	10.9	A	41.4	B	43.4	B
Recruiting skilled people from outside of Canada	95.6	A	33.2	B	13.8	A	23.9	B	14.1	A	15.0	A
Training employees	100.0	A	0.0	A	0.0	A	12.1	A	59.1	B	28.8	B
Using teams within your firm which bring together people with different skills	97.8	A	2.2	A	7.8	A	13.6	A	55.6	B	20.7	A
Performing research and development within your firm	89.2	A	0.0	A	7.7	A	9.9	A	24.8	B	57.5	B
Involvement in collaboration and cooperation with other firms	95.7	A	13.9	A	20.4	A	25.6	A	26.1	B	14.0	A
Developing new products (goods or services) and processes	95.7	A	0.0	A	4.8	A	11.2	A	39.0	B	44.9	B
Active involvement in developing new industry-wide standards	90.3	A	18.2	A	21.9	B	23.2	B	24.6	A	12.2	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media												
Seeking new markets	96.4	A	2.0	A	4.6	A	12.8	A	31.8	B	48.8	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	2.0	A	14.9	A	83.1	A
Developing niche or specialized markets	98.1	A	0.0	A	2.9	A	11.3	A	42.1	B	43.7	B
Developing export markets	97.2	A	5.8	A	1.9	A	16.8	A	21.0	B	54.5	B
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	1.1	A	12.5	A	34.9	B	51.5	B
Providing after-hour client support services	100.0	A	6.6	A	17.2	A	24.2	B	21.2	A	30.8	B
Hiring new graduates from universities	97.1	A	6.9	A	18.7	A	24.8	B	34.5	B	15.2	A
Hiring new graduates from technical schools and colleges	100.0	A	4.0	A	14.2	A	26.7	B	41.6	B	13.5	A
Hiring experienced employees	100.0	A	0.0	A	4.9	A	20.8	B	46.0	B	28.3	B
Recruiting skilled people from outside of Canada	89.2	A	29.3	B	33.5	A	16.8	A	10.6	A	9.8	A
Training employees	100.0	A	0.0	A	0.0	A	14.4	A	38.8	A	46.8	B
Using teams within your firm which bring together people with different skills	96.1	A	4.8	A	9.1	A	15.9	A	33.5	B	36.7	B
Performing research and development within your firm	98.2	A	1.9	A	3.7	A	19.0	B	25.0	A	50.4	B
Involvement in collaboration and cooperation with other firms	98.0	A	3.9	A	23.1	B	13.5	A	39.0	B	20.5	A
Developing new products (goods or services) and processes	100.0	A	3.9	A	6.6	A	9.9	A	25.0	A	54.7	B
Active involvement in developing new industry-wide standards	97.9	A	7.6	A	21.5	A	25.4	B	26.5	B	19.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Electrical Equipment, Appliance and Component Manufacturing												
Seeking new markets	99.2	A	2.1	A	5.4	A	14.8	A	36.3	A	41.4	A
Satisfying existing clients	100.0	A	1.1	A	0.0	A	1.5	A	17.9	A	79.5	A
Developing niche or specialized markets	99.5	A	2.1	A	6.9	A	24.7	A	39.1	A	27.1	A
Developing export markets	98.5	A	6.9	A	8.4	A	16.3	A	31.2	A	37.2	A
Promoting firm or product (good or service) reputation	100.0	A	1.1	A	3.3	A	7.2	A	42.2	A	46.4	A
Providing after-hour client support services	96.6	A	7.3	A	23.1	A	25.3	A	24.9	A	19.4	A
Hiring new graduates from universities	97.6	A	11.7	A	22.9	A	32.7	A	25.0	A	7.8	A
Hiring new graduates from technical schools and colleges	100.0	A	4.0	A	18.8	A	33.8	A	31.9	A	11.5	A
Hiring experienced employees	98.0	A	1.6	A	7.3	A	30.6	A	40.0	A	20.5	A
Recruiting skilled people from outside of Canada	95.1	A	47.7	A	27.7	A	12.3	A	7.8	A	4.5	A
Training employees	98.0	A	0.0	A	4.3	A	14.8	A	44.1	A	36.9	A
Using teams within your firm which bring together people with different skills	95.6	A	2.8	A	8.0	A	26.0	A	31.8	A	31.4	A
Performing research and development within your firm	95.1	A	3.0	A	12.1	A	17.4	A	33.6	A	34.0	A
Involvement in collaboration and cooperation with other firms	95.4	A	8.5	A	25.9	A	23.2	A	29.7	A	12.7	A
Developing new products (goods or services) and processes	98.5	A	0.0	A	6.9	A	14.5	A	39.9	A	38.7	A
Active involvement in developing new industry-wide standards	95.0	A	5.2	A	18.6	A	31.3	A	30.8	A	14.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing												
Seeking new markets	98.3	A	2.5	A	4.7	A	14.6	A	38.2	B	40.0	B
Satisfying existing clients	99.3	A	0.0	A	0.4	A	0.7	A	12.9	A	85.9	A
Developing niche or specialized markets	97.9	A	2.5	A	9.0	A	22.1	A	29.1	A	37.3	A
Developing export markets	96.8	A	5.1	A	11.7	A	18.0	A	36.6	B	28.5	A
Promoting firm or product (good or service) reputation	99.5	A	0.0	A	2.2	A	11.6	A	24.9	A	61.3	B
Providing after-hour client support services	91.2	A	7.9	A	16.2	A	20.6	A	27.7	B	27.5	B
Hiring new graduates from universities	98.4	A	15.4	A	20.0	A	28.9	B	32.2	B	3.5	A
Hiring new graduates from technical schools and colleges	98.8	A	8.7	A	10.7	A	24.6	A	44.1	B	11.9	A
Hiring experienced employees	100.0	A	1.4	A	7.8	A	23.0	A	42.8	B	25.0	A
Recruiting skilled people from outside of Canada	92.2	A	38.0	A	31.4	B	17.3	A	10.0	A	3.3	A
Training employees	100.0	A	0.7	A	1.6	A	10.4	A	38.5	B	48.7	B
Using teams within your firm which bring together people with different skills	98.2	A	3.9	A	2.2	A	23.6	A	34.2	B	36.2	B
Performing research and development within your firm	93.7	A	6.2	A	8.2	A	11.7	A	35.0	B	38.9	B
Involvement in collaboration and cooperation with other firms	92.5	A	11.9	A	24.8	A	29.6	B	27.3	A	6.5	A
Developing new products (goods or services) and processes	95.1	A	2.8	A	8.6	A	12.6	A	37.6	B	38.5	B
Active involvement in developing new industry-wide standards	93.4	A	12.8	A	21.9	A	24.7	A	23.8	A	16.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Aerospace Product and Parts Manufacturing												
Seeking new markets	95.9	A	2.0	A	12.2	B	12.0	B	34.9	B	38.8	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	2.0	A	12.6	A	85.4	B
Developing niche or specialized markets	96.1	A	0.0	A	0.0	A	9.9	B	48.5	B	41.6	B
Developing export markets	91.7	B	4.8	A	8.3	A	14.6	A	36.8	B	35.5	B
Promoting firm or product (good or service) reputation	100.0	A	1.9	A	5.1	A	5.3	A	34.5	B	53.2	B
Providing after-hour client support services	85.5	B	6.6	A	11.0	A	25.7	B	33.3	B	23.4	B
Hiring new graduates from universities	95.6	A	14.2	A	25.7	B	30.4	B	22.2	B	7.6	A
Hiring new graduates from technical schools and colleges	95.6	A	0.0	A	14.2	B	23.3	B	40.4	B	22.1	B
Hiring experienced employees	100.0	A	0.0	A	4.4	A	15.5	B	31.7	B	48.3	B
Recruiting skilled people from outside of Canada	90.5	B	30.8	B	19.9	B	29.6	B	12.0	B	7.7	A
Training employees	100.0	A	0.0	A	0.0	A	13.4	B	34.5	B	52.1	B
Using teams within your firm which bring together people with different skills	100.0	A	8.2	A	1.9	A	12.6	B	39.4	B	37.7	B
Performing research and development within your firm	96.8	A	6.6	A	13.8	B	17.0	A	27.6	B	35.1	B
Involvement in collaboration and cooperation with other firms	92.7	A	2.6	A	23.9	B	26.1	B	30.2	B	17.2	B
Developing new products (goods or services) and processes	94.4	A	2.1	A	10.1	B	17.0	B	41.1	B	29.7	B
Active involvement in developing new industry-wide standards	95.6	A	5.6	A	39.7	B	16.8	B	15.4	B	22.6	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment												
Seeking new markets	100.0	A	2.3	A	11.7	B	7.3	B	44.4	B	34.2	B
Satisfying existing clients	100.0	A	0.0	A	0.0	A	1.7	A	22.1	A	76.1	B
Developing niche or specialized markets	100.0	A	5.2	A	4.1	B	13.8	B	28.4	B	48.4	B
Developing export markets	100.0	A	2.3	A	8.9	A	29.0	B	20.6	B	39.1	B
Promoting firm or product (good or service) reputation	100.0	A	0.0	A	0.0	A	14.5	B	40.3	B	45.2	B
Providing after-hour client support services	98.3	A	6.7	B	19.2	B	18.3	B	22.8	B	33.0	B
Hiring new graduates from universities	98.3	A	18.6	B	33.2	B	28.2	B	18.2	B	1.8	A
Hiring new graduates from technical schools and colleges	98.3	A	8.9	A	21.0	B	27.7	B	27.5	B	15.0	B
Hiring experienced employees	100.0	A	0.0	A	13.3	B	18.3	B	33.3	B	35.0	B
Recruiting skilled people from outside of Canada	86.7	A	58.9	B	24.0	B	4.3	B	10.8	A	2.0	A
Training employees	100.0	A	0.0	A	0.0	A	14.0	A	37.4	B	48.5	B
Using teams within your firm which bring together people with different skills	86.1	A	4.7	A	0.0	A	18.7	B	39.2	B	37.3	B
Performing research and development within your firm	100.0	A	3.5	B	14.6	B	23.3	B	23.5	B	35.2	B
Involvement in collaboration and cooperation with other firms	87.8	A	4.0	A	22.2	B	39.9	B	23.4	B	10.6	B
Developing new products (goods or services) and processes	98.3	A	0.0	A	3.8	A	12.0	B	46.1	B	38.0	B
Active involvement in developing new industry-wide standards	95.4	A	9.7	B	25.7	B	24.3	B	23.5	B	16.8	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 2.4
Firm Success Factors
Industry by Factor
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing												
Seeking new markets	97.9	A	3.9	A	6.4	A	12.5	A	41.9	A	35.4	A
Satisfying existing clients	98.5	A	0.0	A	0.0	A	2.8	A	17.0	A	80.2	A
Developing niche or specialized markets	93.3	A	1.3	A	5.1	A	22.6	A	38.4	A	32.6	A
Developing export markets	96.2	A	4.2	A	8.5	A	16.0	A	36.5	A	34.8	A
Promoting firm or product (good or service) reputation	96.7	A	1.9	A	1.4	A	8.0	A	35.9	A	52.8	A
Providing after-hour client support services	87.0	A	13.8	A	23.5	A	22.2	A	27.3	A	13.2	A
Hiring new graduates from universities	88.5	A	15.4	A	38.7	A	29.1	A	13.1	A	3.7	A
Hiring new graduates from technical schools and colleges	91.5	A	7.4	A	23.1	A	29.1	A	30.9	A	9.5	A
Hiring experienced employees	96.1	A	2.1	A	5.0	A	17.3	A	49.8	A	25.8	A
Recruiting skilled people from outside of Canada	76.6	A	47.2	B	24.0	A	18.9	A	7.6	A	2.3	A
Training employees	97.3	A	1.5	A	1.1	A	16.1	A	45.9	A	35.4	A
Using teams within your firm which bring together people with different skills	86.2	A	6.4	A	9.4	A	30.8	A	28.9	A	24.4	A
Performing research and development within your firm	91.7	A	2.8	A	10.6	A	27.9	A	32.8	A	25.9	A
Involvement in collaboration and cooperation with other firms	86.2	A	18.2	A	24.8	A	25.6	A	22.6	A	8.8	A
Developing new products (goods or services) and processes	96.3	A	1.2	A	4.9	A	16.0	A	41.9	A	36.0	A
Active involvement in developing new industry-wide standards	83.0	A	14.0	A	28.5	A	27.0	A	18.2	A	12.3	A
Miscellaneous Manufacturing												
Seeking new markets	96.3	A	1.8	A	5.0	A	11.1	A	37.0	B	45.1	B
Satisfying existing clients	99.5	A	0.0	A	1.0	A	0.5	A	11.2	A	87.3	A
Developing niche or specialized markets	93.8	A	1.6	A	5.7	A	19.6	A	38.1	B	34.9	B
Developing export markets	94.7	A	11.8	A	14.9	A	10.1	A	22.5	B	40.7	B
Promoting firm or product (good or service) reputation	98.4	A	1.5	A	1.5	A	6.9	A	22.1	A	68.0	B
Providing after-hour client support services	93.6	A	15.9	A	17.6	A	26.3	B	17.1	A	23.1	A
Hiring new graduates from universities	91.9	A	26.2	A	21.6	A	29.6	B	18.4	A	4.2	A
Hiring new graduates from technical schools and colleges	95.8	A	9.8	A	21.3	A	20.8	A	33.5	B	14.6	A
Hiring experienced employees	99.1	A	2.2	A	13.0	A	12.4	A	40.6	B	31.9	B
Recruiting skilled people from outside of Canada	83.6	A	47.2	B	24.9	B	11.2	A	10.2	A	6.6	A
Training employees	99.1	A	1.1	A	4.9	A	9.0	A	44.0	B	41.1	B
Using teams within your firm which bring together people with different skills	92.6	A	3.9	A	7.4	A	20.9	B	38.7	B	29.2	B
Performing research and development within your firm	96.8	A	8.7	A	10.3	A	20.5	A	20.3	A	40.2	B
Involvement in collaboration and cooperation with other firms	94.3	A	12.7	A	18.2	A	27.8	B	30.5	B	10.9	A
Developing new products (goods or services) and processes	98.3	A	1.9	A	3.0	A	10.0	A	36.4	B	48.7	B
Active involvement in developing new industry-wide standards	91.3	A	11.0	A	18.4	A	23.0	B	36.8	B	10.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 3 and 4

The following contains explanations of how to read the tables for Questions 3 and 4 using 'Total Manufacturing Industries' as an example.

In Table 3.1, for 'Total Manufacturing Industries', 80.2% of firms are innovators according to the Oslo definition[1]. For all manufacturing industries combined, 68.0% of firms are product innovators and 65.8% of firms are process innovators.

In Table 3.3, for 'Total Manufacturing Industries':

- 68.0% were product innovators;
- 15.6% had 1-2 new or significantly improved products;
- 23.0% had 3-5 new or significantly improved products;
- 12.8% had 6-10 new or significantly improved products;
- 6.7% had 11-20 new or significantly improved products;
- 4.6% had 21-50 new or significantly improved products; and
- 5.3% had more than 50 new or significantly improved products.

In Table 3.4, for 'Total Manufacturing Industries', 84.7% of innovative firms were product innovators. Of these:

- 23.0% has 1-2 new or significantly improved products;
- 33.9% had 3-5 new or significantly improved products;
- 18.8% had 6-10 new or significantly improved products;
- 9.8% had 11-20 new or significantly improved products;
- 6.8% had 21-50 new or significantly improved products; and
- 7.7% had more than 50 new or significantly improved products.

In Table 3.5, for 'Total Manufacturing Industries', 80.2% of firms are innovators according to the Oslo definition. This 80.2% is made up 53.5% of firms who are both product and process innovators, 14.4% of firms who are product innovators only, and 12.3% of firms who are process innovators only.

In Table 3.6, for 'Total Manufacturing Industries', the innovative firms are made up of 66.7% who are both product and process innovators, 18.0% who are product innovators only, and 15.3% of firms who are process innovators only.

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[1] The Oslo Manual (OECD/Eurostat, 1997) is a collection of proposed guidelines for collecting and interpreting innovation data. This manual identifies two types of innovation that have been adopted by many OECD countries in their investigation of innovation in the manufacturing sector – product and process innovation. In the case of product innovation, the product must have been introduced to the market. A process innovation must have been used within the production process. An innovative firm is one that has implemented a new or significantly improved product or process during the period under review. Eurostat's Community Innovation Surveys (Eurostat 1993, 1997) have adopted a 3-year period of reference to explore the nature of innovation and innovative activity. This 3-year period of reference approach was followed for the Survey of Innovation 1999.

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Table 3.1
Percent of Innovative Firms During the Period 1997-1999
Canada, All Manufacturing

	Innovators		Product Innovators		Process Innovators	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	80.2	A	68.0	A	65.8	A
Food Manufacturing	80.5	A	73.5	A	66.3	A
Beverage and Tobacco Product Manufacturing	76.8	A	63.1	A	63.3	A
Textile Mills	85.8	A	76.1	A	73.0	A
Textile Product Mills	83.5	A	82.7	A	61.0	B
Clothing Manufacturing	69.7	A	54.6	A	54.8	A
Leather and Allied Product Manufacturing	72.1	B	72.1	B	55.6	B
Sawmills and Wood Preservation	73.6	A	51.3	A	65.4	A
Veneer, Plywood and Engineered Wood Product Manufacturing	64.8	A	46.8	A	55.9	A
Other Wood Product Manufacturing	77.2	A	60.5	A	64.9	A
Paper Manufacturing	77.9	A	60.0	A	65.5	A
Printing and Related Support Activities	84.9	A	64.9	A	77.6	A
Petroleum and Coal Products Manufacturing	75.9	A	64.8	A	63.0	A
Chemical Manufacturing (excluding 3254)	87.7	A	78.4	A	63.2	A
Pharmaceutical and Medicine Manufacturing (3254)	86.4	A	77.9	A	58.3	B
Plastics and Rubber Products Manufacturing	85.7	A	77.8	A	72.8	A
Non-Metallic Mineral Products Manufacturing	72.0	A	61.9	A	52.3	A
Primary Metal Manufacturing	75.7	A	58.0	A	67.4	A
Fabricated Metal Product Manufacturing	74.3	A	57.9	A	63.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	88.0	A	80.2	A	62.5	A
Machinery Manufacturing (excluding 3331 & 3332)	86.9	A	74.4	A	70.4	A
Computer and Peripheral Equipment Manufacturing	95.6	A	95.6	A	59.1	B
Communications Equipment Manufacturing	91.5	A	85.5	A	73.6	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	94.9	A	81.3	A	87.8	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	91.3	A	85.4	A	55.7	B
Electrical Equipment, Appliance and Component Manufacturing	89.8	A	84.5	A	75.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	78.6	A	69.2	A	64.5	A
Aerospace Product and Parts Manufacturing	83.9	A	68.1	B	73.3	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	74.7	B	67.8	B	61.6	B
Furniture and Related Products Manufacturing	81.9	A	66.6	A	69.7	A
Miscellaneous Manufacturing	82.2	A	77.2	A	66.6	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 3.2

Percent of Innovative Firms During the Period 1997-1999

Canada, Innovators in Manufacturing

	Innovators		Product Innovators		Process Innovators	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	100.0	A	84.7	A	82.0	A
Food Manufacturing	100.0	A	91.3	A	82.3	A
Beverage and Tobacco Product Manufacturing	100.0	A	82.2	A	82.5	A
Textile Mills	100.0	A	88.7	A	85.2	A
Textile Product Mills	100.0	A	99.1	A	73.0	B
Clothing Manufacturing	100.0	A	78.4	A	78.6	A
Leather and Allied Product Manufacturing	100.0	A	100.0	A	77.2	B
Sawmills and Wood Preservation	100.0	A	69.8	A	88.8	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	72.3	B	86.3	A
Other Wood Product Manufacturing	100.0	A	78.5	A	84.1	A
Paper Manufacturing	100.0	A	77.0	A	84.1	A
Printing and Related Support Activities	100.0	A	76.4	A	91.3	A
Petroleum and Coal Products Manufacturing	100.0	A	85.4	A	82.9	A
Chemical Manufacturing (excluding 3254)	100.0	A	89.4	A	72.0	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	90.2	A	67.5	A
Plastics and Rubber Products Manufacturing	100.0	A	90.8	A	85.0	A
Non-Metallic Mineral Products Manufacturing	100.0	A	85.9	A	72.7	A
Primary Metal Manufacturing	100.0	A	76.7	A	89.1	A
Fabricated Metal Product Manufacturing	100.0	A	77.9	A	85.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0	A	91.1	A	71.1	A
Machinery Manufacturing (excluding 3331 & 3332)	100.0	A	85.6	A	81.0	A
Computer and Peripheral Equipment Manufacturing	100.0	A	100.0	A	61.8	B
Communications Equipment Manufacturing	100.0	A	93.4	A	80.4	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	85.6	A	92.5	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	93.5	A	61.0	B
Electrical Equipment, Appliance and Component Manufacturing	100.0	A	94.1	A	83.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	100.0	A	88.0	A	82.1	A
Aerospace Product and Parts Manufacturing	100.0	A	81.2	B	87.4	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	90.8	B	82.5	B
Furniture and Related Products Manufacturing	100.0	A	81.3	A	85.1	A
Miscellaneous Manufacturing	100.0	A	94.0	A	81.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 3.3

New or Significantly Improved Products During the Period 1997-1999

Canada, All Manufacturing

	Product Innovators		Number of New or Significantly Improved Products, 1997-1999											
			1 - 2		3 - 5		6 - 10		11 - 20		21 - 50		More than 50	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	68.0	A	15.6	A	23.0	A	12.8	A	6.7	A	4.6	A	5.3	A
Food Manufacturing	73.5	A	11.3	A	22.2	A	13.7	A	8.7	A	10.8	A	6.7	A
Beverage and Tobacco Product Manufacturing	63.1	A	10.4	A	20.4	A	12.3	A	14.2	A	2.3	A	3.5	A
Textile Mills	76.1	A	13.4	A	14.9	A	11.8	A	13.3	A	8.0	A	14.8	A
Textile Product Mills	82.7	A	12.4	A	42.9	B	8.7	A	8.3	A	5.7	A	4.7	A
Clothing Manufacturing	54.6	A	6.3	A	13.3	A	12.5	A	6.8	A	3.0	A	12.6	A
Leather and Allied Product Manufacturing	72.1	B	11.3	A	7.8	A	17.5	B	8.9	A	17.1	B	9.5	A
Sawmills and Wood Preservation	51.3	A	26.5	A	17.8	A	5.2	A	0.4	A	0.8	A	0.7	A
Veneer, Plywood and Engineered Wood Product Manufacturing	46.8	A	22.8	A	17.6	A	6.4	A	0.0	A	0.0	A	0.0	A
Other Wood Product Manufacturing	60.5	A	21.8	A	21.6	A	9.4	A	3.0	A	2.0	A	2.8	A
Paper Manufacturing	60.0	A	18.0	A	24.6	A	4.1	A	5.5	A	1.8	A	5.9	A
Printing and Related Support Activities	64.9	A	21.3	A	21.3	A	10.3	A	5.6	A	2.2	A	4.3	A
Petroleum and Coal Products Manufacturing	64.8	A	16.7	A	25.9	A	7.4	A	3.7	A	5.6	A	5.6	A
Chemical Manufacturing (excluding 3254)	78.4	A	14.8	A	19.5	A	18.3	A	11.8	A	8.2	A	5.7	A
Pharmaceutical and Medicine Manufacturing (3254)	77.9	A	10.0	A	18.7	A	11.6	A	15.5	A	6.1	A	15.8	A
Plastics and Rubber Products Manufacturing	77.8	A	15.5	A	26.0	A	18.4	A	6.7	A	5.3	A	5.8	A
Non-Metallic Mineral Products Manufacturing	61.9	A	18.7	A	23.0	A	15.1	A	2.5	A	1.4	A	1.3	A
Primary Metal Manufacturing	58.0	A	16.2	A	23.5	A	8.4	A	2.3	A	5.2	A	2.3	A
Fabricated Metal Product Manufacturing	57.9	A	13.7	A	23.4	A	10.1	A	5.4	A	2.9	A	2.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	80.2	A	15.9	A	36.5	A	17.4	A	8.0	A	0.9	A	1.5	A
Machinery Manufacturing (excluding 3331 & 3332)	74.4	A	18.7	A	24.9	A	16.5	A	4.6	A	4.9	A	4.7	A
Computer and Peripheral Equipment Manufacturing	95.6	A	5.0	A	39.8	B	10.2	B	24.6	B	11.5	A	4.4	A
Communications Equipment Manufacturing	85.5	A	12.9	B	19.4	A	22.3	B	18.1	A	4.7	A	8.1	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	81.3	A	6.3	A	27.9	B	6.3	A	13.5	A	8.4	A	18.9	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	85.4	A	15.5	A	40.3	B	16.7	A	8.1	A	3.7	A	1.1	A
Electrical Equipment, Appliance and Component Manufacturing	84.5	A	19.3	A	23.1	A	12.9	A	12.7	A	8.5	A	8.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	69.2	A	22.4	A	20.6	A	14.9	A	5.5	A	1.7	A	4.1	A
Aerospace Product and Parts Manufacturing	68.1	B	15.5	B	24.8	B	13.1	A	4.9	A	4.1	A	5.7	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	67.8	B	29.9	B	20.1	A	12.1	A	2.6	A	0.0	A	3.2	A
Furniture and Related Products Manufacturing	66.6	A	12.4	A	23.6	A	12.0	A	6.1	A	5.4	A	7.1	A
Miscellaneous Manufacturing	77.2	A	13.2	A	26.6	A	17.1	A	8.3	A	5.4	A	6.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 3.4
New or Significantly Improved Products During the Period 1997-1999
Canada, Innovators in Manufacturing

	Product Innovators		Number of New or Significantly Improved Products, 1997-1999											
			1 - 2		3 - 5		6 - 10		11 - 20		21 - 50		More than 50	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	84.7	A	23.0	A	33.9	A	18.8	A	9.8	A	6.8	A	7.7	A
Food Manufacturing	91.3	A	15.3	A	30.2	A	18.7	A	11.9	A	14.7	A	9.2	A
Beverage and Tobacco Product Manufacturing	82.2	A	16.5	A	32.4	B	19.4	A	22.5	A	3.6	A	5.6	A
Textile Mills	86.7	A	17.6	A	19.6	A	15.5	A	17.5	A	10.5	A	19.4	A
Textile Product Mills	99.1	A	15.0	B	51.8	B	10.5	A	10.1	B	6.8	A	5.7	A
Clothing Manufacturing	78.4	A	11.6	A	24.3	A	22.9	A	12.5	A	5.5	A	23.1	A
Leather and Allied Product Manufacturing	100.0	A	15.6	B	10.8	A	24.3	B	12.3	B	23.7	B	13.2	B
Sawmills and Wood Preservation	69.8	A	51.5	A	34.7	A	10.1	A	0.7	A	1.5	A	1.4	A
Veneer, Plywood and Engineered Wood Product Manufacturing	72.3	B	48.7	B	37.6	B	13.7	B	0.0	A	0.0	A	0.0	A
Other Wood Product Manufacturing	78.5	A	36.0	B	35.6	B	15.5	A	5.0	A	3.2	A	4.7	A
Paper Manufacturing	77.0	A	29.9	A	41.1	A	6.9	A	9.2	A	3.1	A	9.8	A
Printing and Related Support Activities	76.4	A	32.8	B	32.8	B	15.8	A	8.6	A	3.4	A	6.6	A
Petroleum and Coal Products Manufacturing	85.4	A	25.7	A	40.0	A	11.4	A	5.7	A	8.6	A	8.6	A
Chemical Manufacturing (excluding 3254)	89.4	A	18.9	A	24.9	A	23.4	A	15.0	A	10.5	A	7.3	A
Pharmaceutical and Medicine Manufacturing (3254)	90.2	A	12.9	A	24.1	B	14.9	A	19.9	A	7.9	A	20.3	A
Plastics and Rubber Products Manufacturing	90.8	A	19.9	A	33.5	A	23.7	A	8.6	A	6.8	A	7.5	A
Non-Metallic Mineral Products Manufacturing	85.9	A	30.1	A	37.1	A	24.4	A	4.0	A	2.3	A	2.1	A
Primary Metal Manufacturing	76.7	A	27.9	A	40.6	A	14.5	A	4.0	A	8.9	A	4.0	A
Fabricated Metal Product Manufacturing	77.9	A	23.6	A	40.4	B	17.4	A	9.4	A	5.0	A	4.2	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	91.1	A	19.9	A	45.5	A	21.7	A	9.9	A	1.2	A	1.9	A
Machinery Manufacturing (excluding 3331 & 3332)	85.6	A	25.2	A	33.5	B	22.2	A	6.2	A	6.6	A	6.3	A
Computer and Peripheral Equipment Manufacturing	100.0	A	5.2	A	41.7	B	10.7	B	25.8	B	12.0	A	4.7	A
Communications Equipment Manufacturing	93.4	A	15.0	B	22.7	B	26.1	B	21.2	A	5.5	A	9.5	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	85.6	A	7.7	A	34.4	B	7.7	A	16.6	A	10.4	A	23.2	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	93.5	A	18.1	A	47.2	B	19.6	A	9.4	A	4.3	A	1.3	A
Electrical Equipment, Appliance and Component Manufacturing	94.1	A	22.9	A	27.3	A	15.3	A	15.1	A	10.0	A	9.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	88.0	A	32.4	B	29.8	B	21.6	A	7.9	A	2.4	A	5.9	A
Aerospace Product and Parts Manufacturing	81.2	B	22.8	B	36.4	B	19.3	B	7.1	A	6.0	A	8.4	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	90.8	B	44.1	B	29.6	B	17.8	B	3.8	A	0.0	A	4.7	B
Furniture and Related Products Manufacturing	81.3	A	18.6	A	35.4	A	18.0	A	9.2	A	8.1	A	10.7	A
Miscellaneous Manufacturing	94.0	A	17.1	A	34.5	B	22.2	B	10.8	A	6.9	A	8.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 3.5
Percent of Innovative Firms During the Period 1997-1999
Canada, All Manufacturing

	Innovators		Both Product and Process Innovators		Only Product Innovators		Only Process Innovators	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	80.2	A	53.5	A	14.4	A	12.3	A
Food Manufacturing	80.5	A	59.2	A	14.3	A	7.0	A
Beverage and Tobacco Product Manufacturing	76.8	A	49.7	A	13.4	A	13.6	A
Textile Mills	85.8	A	63.3	A	12.7	A	9.7	A
Textile Product Mills	83.5	A	60.2	B	22.5	A	0.8	A
Clothing Manufacturing	69.7	A	39.8	A	14.9	A	15.1	A
Leather and Allied Product Manufacturing	72.1	B	55.6	B	16.5	B	0.0	A
Sawmills and Wood Preservation	73.6	A	43.1	A	8.2	A	22.2	A
Veneer, Plywood and Engineered Wood Product Manufacturing	64.8	A	37.9	A	8.9	A	18.0	A
Other Wood Product Manufacturing	77.2	A	48.2	A	12.3	A	16.6	A
Paper Manufacturing	77.9	A	47.6	A	12.4	A	17.9	A
Printing and Related Support Activities	84.9	A	57.5	A	7.4	A	20.0	A
Petroleum and Coal Products Manufacturing	75.9	A	51.9	A	13.0	A	11.1	A
Chemical Manufacturing (excluding 3254)	87.7	A	53.9	A	24.5	A	9.3	A
Pharmaceutical and Medicine Manufacturing (3254)	86.4	A	49.8	B	28.1	A	8.5	A
Plastics and Rubber Products Manufacturing	85.7	A	64.9	A	12.9	A	7.9	A
Non-Metallic Mineral Products Manufacturing	72.0	A	42.2	A	19.7	A	10.1	A
Primary Metal Manufacturing	75.7	A	49.8	A	8.3	A	17.6	A
Fabricated Metal Product Manufacturing	74.3	A	47.2	A	10.7	A	16.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	88.0	A	54.7	A	25.5	A	7.8	A
Machinery Manufacturing (excluding 3331 & 3332)	86.9	A	57.9	A	16.5	A	12.5	A
Computer and Peripheral Equipment Manufacturing	95.6	A	59.1	B	36.5	B	0.0	A
Communications Equipment Manufacturing	91.5	A	67.5	A	18.0	A	6.1	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	94.9	A	74.1	B	7.1	A	13.6	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	91.3	A	49.8	B	35.6	B	5.9	A
Electrical Equipment, Appliance and Component Manufacturing	89.8	A	69.7	A	14.8	A	5.3	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	78.6	A	55.1	A	14.1	A	9.4	A
Aerospace Product and Parts Manufacturing	83.9	A	57.6	B	10.5	A	15.8	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	74.7	B	54.8	B	13.1	A	6.9	A
Furniture and Related Products Manufacturing	81.9	A	54.4	A	12.2	A	15.3	A
Miscellaneous Manufacturing	82.2	A	61.7	B	15.5	A	5.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 3.6

Percent of Innovative Firms During the Period 1997-1999

Canada, Innovators in Manufacturing

	Innovators		Both Product and Process Innovators		Only Product Innovators		Only Process Innovators	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	100.0	A	66.7	A	18.0	A	15.3	A
Food Manufacturing	100.0	A	73.5	A	17.7	A	8.7	A
Beverage and Tobacco Product Manufacturing	100.0	A	64.7	A	17.5	A	17.8	A
Textile Mills	100.0	A	73.9	A	14.8	A	11.3	A
Textile Product Mills	100.0	A	72.1	B	27.0	B	0.9	A
Clothing Manufacturing	100.0	A	57.0	A	21.4	A	21.6	A
Leather and Allied Product Manufacturing	100.0	A	77.2	B	22.8	B	0.0	A
Sawmills and Wood Preservation	100.0	A	58.6	A	11.2	A	30.2	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	58.5	B	13.7	A	27.7	B
Other Wood Product Manufacturing	100.0	A	62.5	A	15.9	A	21.5	A
Paper Manufacturing	100.0	A	61.1	A	15.9	A	23.0	A
Printing and Related Support Activities	100.0	A	67.8	B	8.7	A	23.6	A
Petroleum and Coal Products Manufacturing	100.0	A	68.3	A	17.1	A	14.6	A
Chemical Manufacturing (excluding 3254)	100.0	A	61.5	A	28.0	A	10.6	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	57.6	B	32.5	A	9.8	A
Plastics and Rubber Products Manufacturing	100.0	A	75.7	A	15.0	A	9.2	A
Non-Metallic Mineral Products Manufacturing	100.0	A	58.6	A	27.3	A	14.1	A
Primary Metal Manufacturing	100.0	A	65.8	A	10.9	A	23.3	A
Fabricated Metal Product Manufacturing	100.0	A	63.5	A	14.4	A	22.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0	A	62.2	A	28.9	A	8.9	A
Machinery Manufacturing (excluding 3331 & 3332)	100.0	A	66.6	A	19.0	A	14.4	A
Computer and Peripheral Equipment Manufacturing	100.0	A	61.8	B	38.2	B	0.0	A
Communications Equipment Manufacturing	100.0	A	73.7	A	19.6	A	6.6	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	100.0	A	78.1	B	7.5	A	14.4	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	54.6	B	39.0	B	6.5	A
Electrical Equipment, Appliance and Component Manufacturing	100.0	A	77.6	A	16.5	A	5.9	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	100.0	A	70.1	A	17.9	A	12.0	A
Aerospace Product and Parts Manufacturing	100.0	A	68.6	B	12.6	A	18.8	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	73.3	B	17.5	B	9.2	B
Furniture and Related Products Manufacturing	100.0	A	66.5	A	14.9	A	18.7	A
Miscellaneous Manufacturing	100.0	A	75.0	A	18.9	A	6.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 4

Data from Question 4 are combined with data from Question 3. The tables are located under tab 3 of this binder.

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Interpretative Notes
Tables for Question 5

There are two tables for Question 5. Table 5.1 is for all manufacturing and Table 5.2 is for innovators in manufacturing.

The following contains an explanation of how to read the tables for Question 5 using Table 5.1 as an example.

In Table 5.1, for 'Total Manufacturing Industries', 49.6% of firms indicated that they had unsuccessful or not yet completed projects to develop or introduce new or significantly improved products or production/manufacturing processes during the period, 1997 – 1999.

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Table 5.1

Firms With Unsuccessful or Not Yet Completed Projects to Develop or Introduce New or Significantly Improved Products or Production/Manufacturing Processes During the Period 1997-1999

Canada, All Manufacturing

	Percent	Reliability
Total Manufacturing Industries	49.6	A
Food Manufacturing	53.3	A
Beverage and Tobacco Product Manufacturing	46.9	A
Textile Mills	66.9	A
Textile Product Mills	44.2	B
Clothing Manufacturing	35.0	A
Leather and Allied Product Manufacturing	55.6	B
Sawmills and Wood Preservation	37.7	A
Veneer, Plywood and Engineered Wood Product Manufacturing	36.3	A
Other Wood Product Manufacturing	38.7	A
Paper Manufacturing	49.3	A
Printing and Related Support Activities	45.1	A
Petroleum and Coal Products Manufacturing	40.7	A
Chemical Manufacturing (excluding 3254)	59.8	A
Pharmaceutical and Medicine Manufacturing (3254)	69.6	A
Plastics and Rubber Products Manufacturing	64.0	A
Non-Metallic Mineral Products Manufacturing	38.4	A
Primary Metal Manufacturing	51.0	A
Fabricated Metal Product Manufacturing	41.9	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	66.9	A
Machinery Manufacturing (excluding 3331 & 3332)	55.1	A
Computer and Peripheral Equipment Manufacturing	64.1	B
Communications Equipment Manufacturing	76.3	B
Audio and Video Equipment Manufacturing	x	A
Semiconductor and Other Electronic Equipment Manufacturing	74.0	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	65.9	B
Electrical Equipment, Appliance and Component Manufacturing	56.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	45.0	A
Aerospace Product and Parts Manufacturing	52.8	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	39.1	B
Furniture and Related Products Manufacturing	44.0	A
Miscellaneous Manufacturing	58.2	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 5.2

Firms With Unsuccessful or Not Yet Completed Projects to Develop or Introduce New or Significantly Improved Products or Production/Manufacturing Processes During the Period 1997-1999

Canada, Innovators in Manufacturing

	Percent	Reliability
Total Manufacturing Industries	59.4	A
Food Manufacturing	63.1	A
Beverage and Tobacco Product Manufacturing	58.1	A
Textile Mills	78.0	A
Textile Product Mills	53.0	B
Clothing Manufacturing	48.3	A
Leather and Allied Product Manufacturing	70.3	B
Sawmills and Wood Preservation	49.7	A
Veneer, Plywood and Engineered Wood Product Manufacturing	45.7	B
Other Wood Product Manufacturing	48.6	A
Paper Manufacturing	58.7	A
Printing and Related Support Activities	49.7	B
Petroleum and Coal Products Manufacturing	48.8	A
Chemical Manufacturing (excluding 3254)	66.9	A
Pharmaceutical and Medicine Manufacturing (3254)	73.2	A
Plastics and Rubber Products Manufacturing	71.9	A
Non-Metallic Mineral Products Manufacturing	51.9	A
Primary Metal Manufacturing	63.3	A
Fabricated Metal Product Manufacturing	53.2	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	73.7	A
Machinery Manufacturing (excluding 3331 & 3332)	61.8	B
Computer and Peripheral Equipment Manufacturing	67.1	B
Communications Equipment Manufacturing	79.1	B
Audio and Video Equipment Manufacturing	x	A
Semiconductor and Other Electronic Equipment Manufacturing	72.6	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	69.2	B
Electrical Equipment, Appliance and Component Manufacturing	61.8	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	54.8	B
Aerospace Product and Parts Manufacturing	61.2	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	50.6	B
Furniture and Related Products Manufacturing	53.7	A
Miscellaneous Manufacturing	68.5	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 6

There are two tables for Question 6. Table 6.1 is for all manufacturing and Table 6.2 is for innovators in manufacturing.

The following contains an explanation of how to read the tables for Question 6 using Table 6.1 as an example.

In Table 6.1, for 'Total Manufacturing Industries', firms indicated if they engaged in the listed activities linked to product or process innovation during the period, 1997 – 1999. From this list of activities:

- 65.0% indicated that they engaged in research and development (R&D) linked to new or significantly improved products (goods or services) or production /manufacturing processes;

- 73.8% indicated they were engaged in the acquisition of machinery, equipment or other technology linked to new or significantly improved products (goods or services) or production/manufacturing processes (process equipment);

- 55.0% indicated they were engaged in industrial engineering and industrial design linked to new or significantly improved products (goods or services) or production/manufacturing processes (industrial design + engineering);

- 59.2% indicated they were engaged in tooling up and production start-up linked to new or significantly improved products (goods or services) or production/manufacturing processes;

- 68.6% indicated they were engaged in training linked to the introduction of to new or significantly improved products (goods or services) or production/manufacturing processes.

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Table 6.1

Firms Engaged In Activities Linked To Product or Process Innovation During the Period 1997-1999

Canada, All Manufacturing

	Activity Linked to Innovation									
	Research and Development		Acquisition of Process Equipment		Industrial Design + Engineering		Tooling Up and Production Start-up		Training	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	65.0	A	73.8	A	55.0	A	59.2	A	68.6	A
Food Manufacturing	68.9	A	75.8	A	54.0	A	59.7	A	67.7	A
Beverage and Tobacco Product Manufacturing	64.3	A	69.2	A	54.4	A	62.9	A	66.3	A
Textile Mills	77.0	A	77.4	A	58.3	A	62.3	A	73.7	A
Textile Product Mills	67.4	B	79.7	A	41.5	B	43.2	B	59.7	B
Clothing Manufacturing	48.2	A	65.6	A	32.0	A	35.4	A	53.5	A
Leather and Allied Product Manufacturing	76.8	B	70.8	B	43.5	B	45.9	B	52.6	B
Sawmills and Wood Preservation	43.9	A	75.3	A	53.8	A	59.6	A	67.0	A
Veneer, Plywood and Engineered Wood Product Manufacturing	56.8	A	69.7	A	52.0	A	46.1	A	63.5	A
Other Wood Product Manufacturing	56.2	A	73.5	A	49.7	A	58.9	A	64.3	A
Paper Manufacturing	63.3	A	77.6	A	59.0	A	56.1	A	71.1	A
Printing and Related Support Activities	51.6	A	83.9	A	32.3	A	49.0	B	74.2	A
Petroleum and Coal Products Manufacturing	64.8	A	68.5	A	57.4	A	59.3	A	74.1	A
Chemical Manufacturing (excluding 3254)	77.0	A	71.9	A	57.1	A	59.3	A	71.3	A
Pharmaceutical and Medicine Manufacturing (3254)	80.2	A	75.6	A	56.6	A	66.7	A	80.9	A
Plastics and Rubber Products Manufacturing	78.8	A	79.7	A	68.3	A	75.6	A	74.2	A
Non-Metallic Mineral Products Manufacturing	55.9	A	57.8	A	41.3	A	51.7	A	54.1	A
Primary Metal Manufacturing	69.7	A	79.0	A	70.0	A	69.3	A	76.9	A
Fabricated Metal Product Manufacturing	57.0	A	69.0	A	52.9	A	60.0	A	64.5	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332	79.7	A	73.0	A	72.5	A	62.2	A	67.8	A
Machinery Manufacturing (excluding 3331 & 3332)	77.5	A	75.4	A	69.4	A	61.5	A	72.1	A
Computer and Peripheral Equipment Manufacturing	90.6	A	81.7	A	64.3	B	71.9	B	85.0	B
Communications Equipment Manufacturing	88.1	A	75.0	B	74.5	B	70.4	B	76.9	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	83.3	A	100.0	A	76.3	B	79.3	B	97.8	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	78.5	A	72.6	A	65.9	A	59.2	B	81.7	A
Electrical Equipment, Appliance and Component Manufacturing	79.8	A	73.4	A	71.3	A	69.6	A	77.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	66.8	A	69.8	A	66.3	A	68.4	A	74.0	A
Aerospace Product and Parts Manufacturing	75.2	B	86.8	A	71.8	B	82.7	B	86.0	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	68.6	B	76.2	B	60.2	B	80.2	B	76.5	B
Furniture and Related Products Manufacturing	61.5	A	76.3	A	53.4	A	60.0	A	68.6	A
Miscellaneous Manufacturing	63.7	B	73.5	A	54.0	B	56.5	B	69.2	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 6.2

Percentage of Firms Engaged In Activities Linked To Product or Process Innovation During the Period 1997-1999

Canada, Innovators in Manufacturing

	Activity Linked to Innovation									
	Research and Development		Acquisition of Process Equipment		Industrial Design + Engineering		Tooling Up and Production Start-up		Training	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	76.9	A	85.5	A	64.7	A	70.8	A	81.3	A
Food Manufacturing	81.5	A	88.0	A	65.1	A	71.5	A	80.3	A
Beverage and Tobacco Product Manufacturing	78.1	A	84.5	A	68.0	A	77.6	A	82.1	A
Textile Mills	89.8	A	89.4	A	66.4	A	72.6	A	85.9	A
Textile Product Mills	74.2	B	87.8	A	49.7	B	51.7	B	68.0	B
Clothing Manufacturing	64.7	A	83.1	A	43.4	A	48.0	A	71.3	A
Leather and Allied Product Manufacturing	94.6	A	87.7	B	58.6	B	63.7	B	71.2	B
Sawmills and Wood Preservation	55.5	A	90.4	A	69.5	A	76.8	A	85.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing	73.1	B	93.5	A	70.1	B	63.8	B	83.6	A
Other Wood Product Manufacturing	68.4	A	84.2	A	59.4	A	70.4	A	77.6	A
Paper Manufacturing	74.9	A	87.0	A	68.0	A	65.8	A	83.3	A
Printing and Related Support Activities	59.7	B	93.4	A	37.6	B	57.2	B	85.3	A
Petroleum and Coal Products Manufacturing	80.5	A	80.5	A	65.9	A	73.2	A	92.7	A
Chemical Manufacturing (excluding 3254)	85.5	A	79.5	A	63.2	A	66.0	A	79.8	A
Pharmaceutical and Medicine Manufacturing (3254)	88.7	A	85.4	A	58.2	B	75.1	A	86.3	A
Plastics and Rubber Products Manufacturing	87.4	A	89.0	A	76.3	A	86.4	A	84.2	A
Non-Metallic Mineral Products Manufacturing	72.8	A	74.3	A	52.6	A	68.2	A	70.0	A
Primary Metal Manufacturing	83.5	A	91.1	A	81.6	A	83.5	A	91.2	A
Fabricated Metal Product Manufacturing	70.8	A	84.2	A	64.7	A	75.7	A	80.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	89.4	A	79.4	A	78.4	A	69.6	A	76.5	A
Machinery Manufacturing (excluding 3331 & 3332)	85.4	A	83.0	A	76.6	A	70.0	A	78.7	A
Computer and Peripheral Equipment Manufacturing	92.4	A	85.5	A	67.2	B	75.2	B	86.6	B
Communications Equipment Manufacturing	90.3	A	76.0	B	79.7	B	75.3	A	82.4	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	82.4	A	100.0	A	75.0	B	78.2	B	97.7	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	83.9	A	77.4	A	70.1	A	64.8	B	88.5	A
Electrical Equipment, Appliance and Component Manufacturing	87.1	A	80.0	A	77.6	A	75.7	A	83.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	80.5	A	83.5	A	80.0	A	82.7	A	88.6	A
Aerospace Product and Parts Manufacturing	81.1	B	94.4	A	83.9	B	94.4	A	96.4	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	84.8	A	95.0	A	75.3	B	93.4	B	95.4	A
Furniture and Related Products Manufacturing	72.7	A	89.9	A	61.8	A	70.9	A	82.3	A
Miscellaneous Manufacturing	74.7	B	83.6	A	62.1	B	66.6	B	81.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Question 7

There are no tabulations for this question. It was a written response and will be analysed later.

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Interpretative Notes
Tables for Question 8

There is one table for Question 8. It is for innovators in manufacturing.

The following contains an explanation of how to read the table for Question 8 using Table 8.1, 'Total Manufacturing Industries', as an example.

In Table 8.1, 'Total Manufacturing Industries', 96.1% of innovative firms indicated that they used at least one of the listed sources of information that contributed to innovation during the period 1997 – 1999. Of these:

- 53.4% used research and development (R&D) staff,
- 66.4% used marketing staff,
- 72.5% used production staff,

…and so on…

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Table 8.1
Sources of Information That Contributed to Innovation During the Period 1997-1999
Industry by Source of Information
Canada, Innovators in Manufacturing

	Percent	Reliability
Total Manufacturing Industries		
Firms that used a source of information	96.1	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	53.4	A
Marketing staff	66.4	A
Production staff	72.5	A
Management staff	76.9	A
Other internal source	14.7	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	35.9	A
Suppliers of equipment, material and components	65.4	A
Clients	65.4	A
Competitors	36.3	A
Consultancy firms	19.2	A
Universities and colleges	8.5	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	8.7	A
Provincial agencies and research laboratories	5.6	A
Generally available sources of information		
Trade fairs and exhibitions	68.9	A
Internet or computer based information networks	38.2	A
Professional conferences, meetings and publications	51.1	A
Other sources of information	8.7	A
Food Manufacturing		
Firms that used a source of information	95.8	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	65.5	A
Marketing staff	77.1	A
Production staff	73.5	A
Management staff	80.9	A
Other internal source	17.2	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	41.1	A
Suppliers of equipment, material and components	67.4	A
Clients	61.8	A
Competitors	35.8	A
Consultancy firms	20.9	A
Universities and colleges	11.1	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	13.0	A
Provincial agencies and research laboratories	9.0	A
Generally available sources of information		
Trade fairs and exhibitions	69.7	A
Internet or computer based information networks	34.1	A
Professional conferences, meetings and publications	49.4	A
Other sources of information	8.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1
Sources of Information That Contributed to Innovation During the Period 1997-1999
Industry by Source of Information
Canada, Innovators in Manufacturing

	Percent	Reliability
Total Manufacturing Industries		
Firms that used a source of information	96.1	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	53.4	A
Marketing staff	66.4	A
Production staff	72.5	A
Management staff	76.9	A
Other internal source	14.7	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	35.9	A
Suppliers of equipment, material and components	65.4	A
Clients	65.4	A
Competitors	36.3	A
Consultancy firms	19.2	A
Universities and colleges	8.5	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	8.7	A
Provincial agencies and research laboratories	5.6	A
Generally available sources of information		
Trade fairs and exhibitions	68.9	A
Internet or computer based information networks	38.2	A
Professional conferences, meetings and publications	51.1	A
Other sources of information	8.7	A
Food Manufacturing		
Firms that used a source of information	95.8	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	65.5	A
Marketing staff	77.1	A
Production staff	73.5	A
Management staff	80.9	A
Other internal source	17.2	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	41.1	A
Suppliers of equipment, material and components	67.4	A
Clients	61.8	A
Competitors	35.8	A
Consultancy firms	20.9	A
Universities and colleges	11.1	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	13.0	A
Provincial agencies and research laboratories	9.0	A
Generally available sources of information		
Trade fairs and exhibitions	69.7	A
Internet or computer based information networks	34.1	A
Professional conferences, meetings and publications	49.4	A
Other sources of information	8.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1
Sources of Information That Contributed to Innovation During the Period 1997-1999
Industry by Source of Information
Canada, Innovators in Manufacturing

	Percent	Reliability
Beverage and Tobacco Product Manufacturing		
Firms that used a source of information	93.9	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	59.7	A
Marketing staff	80.9	A
Production staff	84.8	A
Management staff	80.1	A
Other internal source	19.3	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	62.2	A
Suppliers of equipment, material and components	71.8	A
Clients	33.5	A
Competitors	31.6	A
Consultancy firms	42.3	A
Universities and colleges	14.9	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	8.1	A
Provincial agencies and research laboratories	8.1	A
Generally available sources of information		
Trade fairs and exhibitions	61.4	A
Internet or computer based information networks	42.9	A
Professional conferences, meetings and publications	62.5	A
Other sources of information	18.9	A
Textile Mills		
Firms that used a source of information	97.1	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	70.1	A
Marketing staff	75.6	A
Production staff	72.1	A
Management staff	64.5	A
Other internal source	18.7	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	34.6	A
Suppliers of equipment, material and components	72.2	A
Clients	76.9	A
Competitors	28.3	A
Consultancy firms	22.2	A
Universities and colleges	9.1	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	13.0	A
Provincial agencies and research laboratories	8.4	A
Generally available sources of information		
Trade fairs and exhibitions	83.1	A
Internet or computer based information networks	36.4	A
Professional conferences, meetings and publications	52.9	A
Other sources of information	9.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1
Sources of Information That Contributed to Innovation During the Period 1997-1999
Industry by Source of Information
Canada, Innovators in Manufacturing

	Percent	Reliability
Textile Product Mills		
Firms that used a source of information	100.0	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	37.8	B
Marketing staff	71.7	B
Production staff	63.7	B
Management staff	66.8	B
Other internal source	7.8	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	20.0	B
Suppliers of equipment, material and components	54.0	B
Clients	72.1	B
Competitors	38.7	B
Consultancy firms	10.6	B
Universities and colleges	1.9	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	5.6	A
Provincial agencies and research laboratories	6.3	A
Generally available sources of information		
Trade fairs and exhibitions	75.2	B
Internet or computer based information networks	33.3	B
Professional conferences, meetings and publications	30.8	B
Other sources of information	6.0	A
Clothing Manufacturing		
Firms that used a source of information	92.5	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	43.1	A
Marketing staff	60.3	A
Production staff	75.5	A
Management staff	74.1	A
Other internal source	8.6	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	21.0	A
Suppliers of equipment, material and components	65.0	A
Clients	66.5	A
Competitors	29.8	A
Consultancy firms	21.5	A
Universities and colleges	4.3	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	6.9	A
Provincial agencies and research laboratories	2.1	A
Generally available sources of information		
Trade fairs and exhibitions	72.8	A
Internet or computer based information networks	37.8	A
Professional conferences, meetings and publications	38.8	A
Other sources of information	4.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1

Sources of Information That Contributed to Innovation During the Period 1997-1999

Industry by Source of Information

Canada, Innovators in Manufacturing

	Percent	Reliability
Leather and Allied Product Manufacturing		
Firms that used a source of information	91.3	B
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	62.5	B
Marketing staff	55.9	B
Production staff	59.2	B
Management staff	54.3	B
Other internal source	9.9	B
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	20.4	B
Suppliers of equipment, material and components	68.1	B
Clients	79.3	B
Competitors	36.2	B
Consultancy firms	7.6	A
Universities and colleges	2.0	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	5.6	A
Provincial agencies and research laboratories	7.6	A
Generally available sources of information		
Trade fairs and exhibitions	78.9	B
Internet or computer based information networks	29.6	B
Professional conferences, meetings and publications	26.0	B
Other sources of information	15.1	B
Sawmills and Wood Preservation		
Firms that used a source of information	97.7	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	24.6	A
Marketing staff	50.2	A
Production staff	78.2	A
Management staff	80.8	A
Other internal source	11.5	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	36.5	A
Suppliers of equipment, material and components	76.9	A
Clients	44.4	A
Competitors	33.2	A
Consultancy firms	30.7	A
Universities and colleges	7.6	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	14.8	A
Provincial agencies and research laboratories	14.7	A
Generally available sources of information		
Trade fairs and exhibitions	68.6	A
Internet or computer based information networks	22.2	A
Professional conferences, meetings and publications	55.8	A
Other sources of information	10.3	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1
Sources of Information That Contributed to Innovation During the Period 1997-1999
Industry by Source of Information
Canada, Innovators in Manufacturing

	Percent	Reliability
Veneer, Plywood and Engineered Wood Product Manufacturing		
Firms that used a source of information	96.3	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	38.5	B
Marketing staff	65.4	B
Production staff	83.0	A
Management staff	85.1	A
Other internal source	19.9	B
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	37.7	B
Suppliers of equipment, material and components	80.2	A
Clients	44.5	B
Competitors	20.2	B
Consultancy firms	26.4	B
Universities and colleges	13.2	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	14.8	A
Provincial agencies and research laboratories	16.4	A
Generally available sources of information		
Trade fairs and exhibitions	51.4	B
Internet or computer based information networks	19.3	B
Professional conferences, meetings and publications	71.1	B
Other sources of information	4.8	A
Other Wood Product Manufacturing		
Firms that used a source of information	91.3	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	30.0	B
Marketing staff	54.6	B
Production staff	69.4	A
Management staff	76.1	A
Other internal source	10.7	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	23.2	A
Suppliers of equipment, material and components	63.0	B
Clients	59.2	B
Competitors	35.5	B
Consultancy firms	14.9	A
Universities and colleges	3.0	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	6.7	A
Provincial agencies and research laboratories	5.0	A
Generally available sources of information		
Trade fairs and exhibitions	62.8	A
Internet or computer based information networks	25.8	A
Professional conferences, meetings and publications	38.8	B
Other sources of information	6.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1

Sources of Information That Contributed to Innovation During the Period 1997-1999

Industry by Source of Information

Canada, Innovators in Manufacturing

	Percent	Reliability
Paper Manufacturing		
Firms that used a source of information	96.5	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	53.3	A
Marketing staff	74.9	A
Production staff	75.1	A
Management staff	77.1	A
Other internal source	16.5	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	45.2	A
Suppliers of equipment, material and components	73.6	A
Clients	66.8	A
Competitors	33.0	A
Consultancy firms	25.3	A
Universities and colleges	3.1	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	5.7	A
Provincial agencies and research laboratories	4.0	A
Generally available sources of information		
Trade fairs and exhibitions	59.5	A
Internet or computer based information networks	35.4	A
Professional conferences, meetings and publications	61.5	A
Other sources of information	11.1	A
Printing and Related Support Activities		
Firms that used a source of information	97.4	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	25.4	B
Marketing staff	54.3	B
Production staff	71.4	B
Management staff	79.3	A
Other internal source	8.2	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	26.9	B
Suppliers of equipment, material and components	83.7	A
Clients	63.4	B
Competitors	32.9	B
Consultancy firms	10.6	A
Universities and colleges	1.4	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	0.5	A
Provincial agencies and research laboratories	0.7	A
Generally available sources of information		
Trade fairs and exhibitions	77.5	A
Internet or computer based information networks	42.1	B
Professional conferences, meetings and publications	57.4	B
Other sources of information	12.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1
Sources of Information That Contributed to Innovation During the Period 1997-1999
Industry by Source of Information
Canada, Innovators in Manufacturing

	Percent	Reliability
Petroleum and Coal Products Manufacturing		
Firms that used a source of information	**97.6**	**A**
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	65.0	A
Marketing staff	67.5	A
Production staff	82.5	A
Management staff	75.0	A
Other internal source	20.0	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	52.5	A
Suppliers of equipment, material and components	47.5	A
Clients	57.5	A
Competitors	40.0	A
Consultancy firms	20.0	A
Universities and colleges	12.5	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	7.5	A
Provincial agencies and research laboratories	15.0	A
Generally available sources of information		
Trade fairs and exhibitions	42.5	A
Internet or computer based information networks	32.5	A
Professional conferences, meetings and publications	75.0	A
Other sources of information	5.0	A
Chemical Manufacturing (excluding 3254)		
Firms that used a source of information	**97.6**	**A**
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	76.7	A
Marketing staff	76.3	A
Production staff	70.6	A
Management staff	64.5	A
Other internal source	16.4	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	51.0	A
Suppliers of equipment, material and components	50.1	A
Clients	66.5	A
Competitors	33.6	A
Consultancy firms	15.5	A
Universities and colleges	12.9	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	8.1	A
Provincial agencies and research laboratories	5.7	A
Generally available sources of information		
Trade fairs and exhibitions	52.4	A
Internet or computer based information networks	37.2	A
Professional conferences, meetings and publications	58.1	A
Other sources of information	7.3	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1
Sources of Information That Contributed to Innovation During the Period 1997-1999
Industry by Source of Information
Canada, Innovators in Manufacturing

	Percent	Reliability
Pharmaceutical and Medicine Manufacturing (3254)		
Firms that used a source of information	93.1	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	78.6	B
Marketing staff	70.7	A
Production staff	69.9	B
Management staff	68.2	A
Other internal source	10.3	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	54.4	B
Suppliers of equipment, material and components	52.7	B
Clients	58.0	B
Competitors	31.2	B
Consultancy firms	20.2	A
Universities and colleges	21.9	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	8.3	A
Provincial agencies and research laboratories	11.1	A
Generally available sources of information		
Trade fairs and exhibitions	50.9	B
Internet or computer based information networks	33.5	B
Professional conferences, meetings and publications	71.6	A
Other sources of information	8.5	A
Plastics and Rubber Products Manufacturing		
Firms that used a source of information	98.1	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	63.3	A
Marketing staff	71.3	A
Production staff	79.5	A
Management staff	76.6	A
Other internal source	19.1	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	38.6	A
Suppliers of equipment, material and components	70.7	A
Clients	64.4	A
Competitors	34.1	A
Consultancy firms	18.5	A
Universities and colleges	8.4	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	9.5	A
Provincial agencies and research laboratories	5.7	A
Generally available sources of information		
Trade fairs and exhibitions	70.9	A
Internet or computer based information networks	40.4	A
Professional conferences, meetings and publications	47.6	A
Other sources of information	8.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1
Sources of Information That Contributed to Innovation During the Period 1997-1999
Industry by Source of Information
Canada, Innovators in Manufacturing

	Percent	Reliability
Non-Metallic Mineral Products Manufacturing		
Firms that used a source of information	96.4	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	43.8	A
Marketing staff	67.1	A
Production staff	74.5	A
Management staff	79.0	A
Other internal source	15.3	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	45.3	A
Suppliers of equipment, material and components	64.9	A
Clients	60.7	A
Competitors	31.7	A
Consultancy firms	23.2	A
Universities and colleges	11.1	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	11.5	A
Provincial agencies and research laboratories	9.0	A
Generally available sources of information		
Trade fairs and exhibitions	54.9	A
Internet or computer based information networks	29.5	A
Professional conferences, meetings and publications	54.3	A
Other sources of information	11.8	A
Primary Metal Manufacturing		
Firms that used a source of information	98.8	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	51.5	A
Marketing staff	61.8	A
Production staff	87.1	A
Management staff	82.9	A
Other internal source	17.8	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	46.4	A
Suppliers of equipment, material and components	73.8	A
Clients	58.2	A
Competitors	31.8	A
Consultancy firms	17.4	A
Universities and colleges	13.0	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	10.3	A
Provincial agencies and research laboratories	5.5	A
Generally available sources of information		
Trade fairs and exhibitions	66.1	A
Internet or computer based information networks	38.1	A
Professional conferences, meetings and publications	69.0	A
Other sources of information	7.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1

Sources of Information That Contributed to Innovation During the Period 1997-1999

Industry by Source of Information

Canada, Innovators in Manufacturing

	Percent	Reliability
Fabricated Metal Product Manufacturing		
Firms that used a source of information	97.5	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	43.5	A
Marketing staff	58.1	A
Production staff	67.5	A
Management staff	79.4	A
Other internal source	13.5	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	27.6	A
Suppliers of equipment, material and components	62.1	A
Clients	66.4	A
Competitors	40.2	A
Consultancy firms	19.8	A
Universities and colleges	7.4	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	8.0	A
Provincial agencies and research laboratories	4.0	A
Generally available sources of information		
Trade fairs and exhibitions	65.6	A
Internet or computer based information networks	35.8	A
Professional conferences, meetings and publications	45.2	A
Other sources of information	8.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)		
Firms that used a source of information	93.5	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	73.7	A
Marketing staff	82.6	A
Production staff	58.7	A
Management staff	77.1	A
Other internal source	21.5	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	34.5	A
Suppliers of equipment, material and components	42.3	A
Clients	82.8	A
Competitors	40.4	A
Consultancy firms	13.4	A
Universities and colleges	10.2	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	10.3	A
Provincial agencies and research laboratories	4.6	A
Generally available sources of information		
Trade fairs and exhibitions	77.2	A
Internet or computer based information networks	38.2	A
Professional conferences, meetings and publications	55.5	A
Other sources of information	9.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1
Sources of Information That Contributed to Innovation During the Period 1997-1999
Industry by Source of Information
Canada, Innovators in Manufacturing

	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)		
Firms that used a source of information	97.9	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	60.3	B
Marketing staff	66.9	A
Production staff	73.5	A
Management staff	76.0	A
Other internal source	12.6	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	35.5	B
Suppliers of equipment, material and components	58.7	B
Clients	75.3	A
Competitors	39.7	B
Consultancy firms	15.1	A
Universities and colleges	10.9	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	7.4	A
Provincial agencies and research laboratories	2.9	A
Generally available sources of information		
Trade fairs and exhibitions	69.4	A
Internet or computer based information networks	49.0	B
Professional conferences, meetings and publications	47.4	B
Other sources of information	8.1	A
Computer and Peripheral Equipment Manufacturing		
Firms that used a source of information	100.0	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	82.0	B
Marketing staff	82.6	B
Production staff	38.8	B
Management staff	85.3	B
Other internal source	9.7	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	38.6	B
Suppliers of equipment, material and components	56.2	B
Clients	82.8	B
Competitors	52.9	B
Consultancy firms	19.0	A
Universities and colleges	17.8	B
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	9.7	A
Provincial agencies and research laboratories	13.2	B
Generally available sources of information		
Trade fairs and exhibitions	88.4	A
Internet or computer based information networks	85.1	B
Professional conferences, meetings and publications	75.6	B
Other sources of information	7.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1
Sources of Information That Contributed to Innovation During the Period 1997-1999
Industry by Source of Information
Canada, Innovators in Manufacturing

	Percent	Reliability
Communications Equipment Manufacturing		
Firms that used a source of information	96.2	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	86.3	B
Marketing staff	80.8	B
Production staff	54.7	B
Management staff	66.3	B
Other internal source	15.5	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	27.8	B
Suppliers of equipment, material and components	51.8	B
Clients	74.6	B
Competitors	50.3	B
Consultancy firms	23.2	B
Universities and colleges	4.6	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	14.2	A
Provincial agencies and research laboratories	3.4	A
Generally available sources of information		
Trade fairs and exhibitions	63.3	B
Internet or computer based information networks	63.2	B
Professional conferences, meetings and publications	58.9	B
Other sources of information	9.4	A
Audio and Video Equipment Manufacturing		
Firms that used a source of information	x	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	x	A
Marketing staff	x	A
Production staff	x	A
Management staff	x	A
Other internal source	x	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	x	A
Suppliers of equipment, material and components	x	A
Clients	x	A
Competitors	x	A
Consultancy firms	x	A
Universities and colleges	x	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	x	A
Provincial agencies and research laboratories	x	A
Generally available sources of information		
Trade fairs and exhibitions	x	A
Internet or computer based information networks	x	A
Professional conferences, meetings and publications	x	A
Other sources of information	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1

Sources of Information That Contributed to Innovation During the Period 1997-1999

Industry by Source of Information

Canada, Innovators in Manufacturing

	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing		
Firms that used a source of information	**97.8**	**A**
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	66.2	B
Marketing staff	76.5	B
Production staff	68.8	B
Management staff	93.3	A
Other internal source	22.7	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	37.2	B
Suppliers of equipment, material and components	62.1	B
Clients	90.9	A
Competitors	47.3	B
Consultancy firms	26.1	A
Universities and colleges	11.4	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	4.5	A
Provincial agencies and research laboratories	4.5	A
Generally available sources of information		
Trade fairs and exhibitions	78.7	B
Internet or computer based information networks	75.1	B
Professional conferences, meetings and publications	56.9	B
Other sources of information	11.3	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media		
Firms that used a source of information	**96.0**	**A**
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	73.4	A
Marketing staff	73.8	A
Production staff	66.6	B
Management staff	76.4	B
Other internal source	17.5	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	44.4	B
Suppliers of equipment, material and components	51.4	B
Clients	80.3	A
Competitors	40.2	B
Consultancy firms	20.9	A
Universities and colleges	21.4	B
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	22.1	A
Provincial agencies and research laboratories	8.3	A
Generally available sources of information		
Trade fairs and exhibitions	71.4	B
Internet or computer based information networks	55.4	B
Professional conferences, meetings and publications	65.0	B
Other sources of information	8.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1
Sources of Information That Contributed to Innovation During the Period 1997-1999
Industry by Source of Information
Canada, Innovators in Manufacturing

	Percent	Reliability
Electrical Equipment, Appliance and Component Manufacturing		
Firms that used a source of information	95.0	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	70.0	A
Marketing staff	81.2	A
Production staff	70.6	A
Management staff	76.5	A
Other internal source	19.1	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	48.2	A
Suppliers of equipment, material and components	54.5	A
Clients	76.9	A
Competitors	44.2	A
Consultancy firms	20.0	A
Universities and colleges	11.7	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	9.1	A
Provincial agencies and research laboratories	6.9	A
Generally available sources of information		
Trade fairs and exhibitions	76.6	A
Internet or computer based information networks	48.2	A
Professional conferences, meetings and publications	63.7	A
Other sources of information	6.8	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing		
Firms that used a source of information	96.3	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	66.1	B
Marketing staff	56.8	B
Production staff	70.5	A
Management staff	80.9	A
Other internal source	19.1	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	48.4	B
Suppliers of equipment, material and components	70.6	A
Clients	71.7	A
Competitors	39.5	B
Consultancy firms	14.0	A
Universities and colleges	9.0	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	8.7	A
Provincial agencies and research laboratories	6.2	A
Generally available sources of information		
Trade fairs and exhibitions	66.1	B
Internet or computer based information networks	42.6	B
Professional conferences, meetings and publications	53.4	B
Other sources of information	5.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1
Sources of Information That Contributed to Innovation During the Period 1997-1999
Industry by Source of Information
Canada, Innovators in Manufacturing

	Percent	Reliability
Aerospace Product and Parts Manufacturing		
Firms that used a source of information	96.3	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	50.8	B
Marketing staff	50.4	B
Production staff	79.6	B
Management staff	82.6	B
Other internal source	30.5	B
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	46.8	B
Suppliers of equipment, material and components	67.1	B
Clients	73.7	B
Competitors	26.3	B
Consultancy firms	44.2	B
Universities and colleges	15.6	B
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	18.8	A
Provincial agencies and research laboratories	17.7	A
Generally available sources of information		
Trade fairs and exhibitions	55.9	B
Internet or computer based information networks	41.9	B
Professional conferences, meetings and publications	53.4	B
Other sources of information	5.5	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment		
Firms that used a source of information	98.3	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	56.5	B
Marketing staff	68.4	B
Production staff	81.0	B
Management staff	88.4	A
Other internal source	15.5	B
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	37.3	B
Suppliers of equipment, material and components	66.8	B
Clients	64.1	B
Competitors	45.9	B
Consultancy firms	37.0	B
Universities and colleges	8.0	B
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	7.7	A
Provincial agencies and research laboratories	7.4	A
Generally available sources of information		
Trade fairs and exhibitions	72.9	B
Internet or computer based information networks	51.5	B
Professional conferences, meetings and publications	39.4	B
Other sources of information	11.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 8.1

Sources of Information That Contributed to Innovation During the Period 1997-1999

Industry by Source of Information

Canada, Innovators in Manufacturing

	Percent	Reliability
Furniture and Related Products Manufacturing		
Firms that used a source of information	94.7	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	44.6	A
Marketing staff	61.7	A
Production staff	74.0	A
Management staff	76.6	A
Other internal source	11.6	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	24.8	A
Suppliers of equipment, material and components	75.1	A
Clients	59.4	A
Competitors	32.7	A
Consultancy firms	21.1	A
Universities and colleges	5.8	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	5.[illegible]	A
Provincial agencies and research laboratories	1.9	A
Generally available sources of information		
Trade fairs and exhibitions	80.6	A
Internet or computer based information networks	29.8	A
Professional conferences, meetings and publications	39.6	A
Other sources of information	5.9	A
Miscellaneous Manufacturing		
Firms that used a source of information	91.6	A
Of these, % that used the following:		
Internal sources of information		
Research and development (R&D) staff	53.1	B
Marketing staff	66.2	B
Production staff	76.7	B
Management staff	73.2	B
Other internal source	13.7	A
External sources of information		
Related firms in your corporate group (e.g. parent or subsidiary)	38.0	B
Suppliers of equipment, material and components	63.2	B
Clients	54.2	B
Competitors	44.5	B
Consultancy firms	15.9	A
Universities and colleges	8.7	A
Federal government agencies and research laboratories (e.g. National Research Council of Canada)	8.4	A
Provincial agencies and research laboratories	4.8	A
Generally available sources of information		
Trade fairs and exhibitions	75.4	B
Internet or computer based information networks	38.6	B
Professional conferences, meetings and publications	55.4	B
Other sources of information	13.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 9

There are two tables for Question 9. Both are for innovators in manufacturing. The two tables are sorted differently. The first table, Table 9.1, presents objective of innovation by industry whereas the second table, Table 9.2, presents industry by objective of innovation.

The following contains an explanation of how to read these tables using Table 9.1, 'Total Manufacturing Industries', as an example.

In Table 9.1, for 'Total Manufacturing Industries', 93.7% of innovative firms identified "To reduce labour costs" as an objective of innovation during the period, 1997 – 1999. Of these:

- 9.9% indicated low importance;
- 9.6% indicated moderately low importance;
- 17.9% indicated medium importance;
- 25.4 indicated moderately high importance; and
- 37.3% indicated high importance.

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Table 9.1
Objectives of Innovation During the Period 1997-1999
Objective by Industry
Canada, Innovators in Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
To reduce labour costs												
Total Manufacturing Industries	93.7	A	9.9	A	9.6	A	17.9	A	25.4	A	37.3	A
Food Manufacturing	94.2	A	10.5	A	9.1	A	17.3	A	26.5	A	36.6	A
Beverage and Tobacco Product Manufacturing	89.6	A	9.9	A	8.3	A	8.5	A	31.7	A	41.6	A
Textile Mills	91.0	A	10.6	A	11.7	A	17.9	A	26.4	A	33.5	A
Textile Product Mills	99.1	A	9.4	B	3.3	A	9.9	B	37.4	B	40.0	B
Clothing Manufacturing	89.0	A	8.2	A	8.7	A	21.1	A	17.2	A	44.8	A
Leather and Allied Product Manufacturing	92.8	A	12.9	A	20.1	B	9.7	B	27.8	B	29.4	B
Sawmills and Wood Preservation	95.2	A	14.7	A	10.4	A	13.6	A	25.2	A	36.1	A
Veneer, Plywood and Engineered Wood Product Manufacturing	95.3	A	11.2	A	10.5	A	28.6	B	19.6	A	30.0	B
Other Wood Product Manufacturing	89.5	A	6.9	A	7.7	A	18.7	A	27.1	A	39.6	B
Paper Manufacturing	91.9	A	15.6	A	10.1	A	18.9	A	17.7	A	37.7	A
Printing and Related Support Activities	96.8	A	10.2	A	9.8	A	20.5	A	27.0	A	32.5	B
Petroleum and Coal Products Manufacturing	90.2	A	18.9	A	16.2	A	32.4	A	24.3	A	8.1	A
Chemical Manufacturing (excluding 3254)	90.0	A	17.2	A	11.7	A	18.0	A	26.4	A	26.7	A
Pharmaceutical and Medicine Manufacturing (3254)	88.9	A	12.8	A	14.5	A	10.5	A	17.0	A	45.3	B
Plastics and Rubber Products Manufacturing	95.2	A	10.1	A	9.4	A	18.0	A	24.3	A	38.1	A
Non-Metallic Mineral Products Manufacturing	91.4	A	15.6	A	11.3	A	13.6	A	23.7	A	35.8	A
Primary Metal Manufacturing	96.3	A	5.0	A	5.1	A	14.0	A	30.7	A	45.2	A
Fabricated Metal Product Manufacturing	94.7	A	7.3	A	9.2	A	17.1	A	26.9	A	39.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	93.2	A	10.9	A	14.2	A	20.9	A	24.4	A	29.7	A
Machinery Manufacturing (excluding 3331 & 3332)	94.2	A	8.4	A	11.5	A	21.1	A	28.6	A	30.4	B
Computer and Peripheral Equipment Manufacturing	93.0	A	24.4	B	19.6	B	10.4	A	18.5	B	27.1	B
Communications Equipment Manufacturing	97.4	A	1.7	A	5.2	A	25.8	B	40.8	B	26.5	B
Audio and Video Equipment Manufacturing	x	A	0.0	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	90.2	A	0.0	A	10.0	A	19.4	B	35.3	B	35.3	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	90.4	A	9.7	A	11.9	A	16.6	A	24.5	A	37.4	B
Electrical Equipment, Appliance and Component Manufacturing	96.4	A	8.5	A	10.1	A	19.3	A	24.0	A	38.2	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	93.6	A	4.3	A	9.7	A	13.2	A	29.9	A	42.9	B
Aerospace Product and Parts Manufacturing	93.4	A	7.7	A	5.7	A	12.7	A	31.4	B	42.4	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	91.0	B	9.3	A	5.3	B	21.1	B	27.7	B	36.5	B
Furniture and Related Products Manufacturing	96.5	A	8.0	A	6.3	A	17.9	A	21.5	A	46.3	A
Miscellaneous Manufacturing	93.8	A	10.3	A	7.8	A	18.9	A	17.8	A	45.3	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.1
Objectives of Innovation During the Period 1997-1999
Objective by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
To increase production capacity												
Total Manufacturing Industries	95.6	A	4.2	A	6.0	A	11.0	A	29.3	A	49.5	A
Food Manufacturing	97.1	A	5.3	A	7.1	A	11.8	A	29.7	A	46.1	A
Beverage and Tobacco Product Manufacturing	95.8	A	4.7	A	9.1	A	6.0	A	25.6	A	54.5	A
Textile Mills	100.0	A	7.5	A	2.9	A	16.7	A	26.9	A	46.0	A
Textile Product Mills	86.3	A	3.3	A	1.9	A	10.1	B	29.1	B	55.6	B
Clothing Manufacturing	91.8	A	2.8	A	4.6	A	17.5	A	19.3	A	55.8	A
Leather and Allied Product Manufacturing	100.0	A	10.8	B	12.0	B	10.5	B	26.4	B	40.2	B
Sawmills and Wood Preservation	98.3	A	8.0	A	3.1	A	5.9	A	28.8	A	54.2	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	6.3	A	4.6	A	4.6	A	20.8	A	63.7	B
Other Wood Product Manufacturing	94.6	A	2.9	A	7.9	A	9.8	A	28.6	A	50.8	B
Paper Manufacturing	97.2	A	7.3	A	5.3	A	12.2	A	23.0	A	52.3	A
Printing and Related Support Activities	99.0	A	0.9	A	2.9	A	6.0	A	32.3	B	57.9	B
Petroleum and Coal Products Manufacturing	95.1	A	2.6	A	2.6	A	25.6	A	41.0	A	28.2	A
Chemical Manufacturing (excluding 3254)	92.8	A	7.3	A	6.4	A	10.1	A	31.4	A	44.8	A
Pharmaceutical and Medicine Manufacturing (3254)	96.3	A	2.2	A	12.4	A	9.1	A	38.1	B	38.2	B
Plastics and Rubber Products Manufacturing	95.8	A	3.6	A	2.8	A	11.8	A	29.4	A	52.4	A
Non-Metallic Mineral Products Manufacturing	92.4	A	9.5	A	6.3	A	8.4	A	24.2	A	51.7	A
Primary Metal Manufacturing	96.3	A	1.3	A	5.0	A	10.9	A	24.9	A	57.9	A
Fabricated Metal Product Manufacturing	96.9	A	2.2	A	4.3	A	9.2	A	29.0	A	55.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	92.0	A	6.6	A	13.9	A	16.5	A	25.9	A	37.1	A
Machinery Manufacturing (excluding 3331 & 3332)	94.3	A	4.6	A	7.3	A	10.9	A	37.2	B	40.1	B
Computer and Peripheral Equipment Manufacturing	93.0	A	7.5	A	10.4	A	22.7	B	18.5	B	40.8	B
Communications Equipment Manufacturing	98.2	A	3.4	A	11.2	A	18.3	A	37.5	B	29.6	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	90.2	A	0.0	A	8.3	A	17.3	B	35.3	B	39.0	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	86.7	A	11.1	A	8.9	A	16.1	B	34.6	B	29.3	B
Electrical Equipment, Appliance and Component Manufacturing	95.4	A	3.3	A	12.2	A	21.8	A	28.5	A	34.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	95.7	A	1.2	A	5.3	A	14.0	A	27.1	A	52.4	B
Aerospace Product and Parts Manufacturing	98.3	A	3.9	A	7.4	A	3.7	A	36.9	B	48.0	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	97.9	A	1.8	A	5.3	A	3.6	A	45.5	B	43.8	B
Furniture and Related Products Manufacturing	97.6	A	2.8	A	2.4	A	9.3	A	29.8	A	55.6	A
Miscellaneous Manufacturing	95.4	A	4.5	A	11.5	A	6.5	A	29.5	B	48.0	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.1
Objectives of Innovation During the Period 1997-1999
Objective by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
To reduce production time												
Total Manufacturing Industries	93.7	A	6.1	A	7.3	A	15.4	A	30.1	A	41.1	A
Food Manufacturing	92.6	A	8.7	A	12.5	A	19.4	A	28.8	A	30.7	A
Beverage and Tobacco Product Manufacturing	90.9	A	9.7	A	12.2	A	19.0	A	26.4	A	32.8	A
Textile Mills	98.6	A	8.2	A	7.5	A	15.5	A	28.4	A	40.4	A
Textile Product Mills	85.6	A	2.2	A	3.0	A	22.1	B	34.8	B	37.9	B
Clothing Manufacturing	90.6	A	4.9	A	3.9	A	22.9	A	22.6	A	45.6	A
Leather and Allied Product Manufacturing	98.2	A	10.7	A	8.9	A	8.9	A	32.7	B	38.8	B
Sawmills and Wood Preservation	88.7	A	20.2	A	9.5	A	13.0	A	19.6	A	37.7	A
Veneer, Plywood and Engineered Wood Product Manufacturing	93.8	A	11.6	A	8.0	A	10.6	A	29.3	B	40.5	B
Other Wood Product Manufacturing	88.3	A	6.8	A	8.9	A	15.9	A	32.5	A	36.0	B
Paper Manufacturing	91.0	A	12.2	A	9.3	A	15.6	A	24.3	A	38.7	A
Printing and Related Support Activities	99.0	A	0.6	A	3.1	A	12.4	A	26.9	A	56.9	B
Petroleum and Coal Products Manufacturing	82.9	A	11.8	A	8.8	A	38.2	A	29.4	A	11.8	A
Chemical Manufacturing (excluding 3254)	87.1	A	11.1	A	11.6	A	17.4	A	30.3	A	29.6	A
Pharmaceutical and Medicine Manufacturing (3254)	96.3	A	2.9	A	8.5	A	22.0	A	26.4	A	4[illegible].2	B
Plastics and Rubber Products Manufacturing	95.7	A	5.4	A	4.8	A	15.3	A	34.7	A	39.8	A
Non-Metallic Mineral Products Manufacturing	90.9	A	14.5	A	6.7	A	14.2	A	24.9	A	39.7	A
Primary Metal Manufacturing	96.9	A	7.9	A	4.5	A	10.6	A	31.9	A	45.1	A
Fabricated Metal Product Manufacturing	96.5	A	3.5	A	6.2	A	10.9	A	31.1	A	48.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	91.2	A	6.0	A	7.1	A	22.1	A	26.8	A	38.0	A
Machinery Manufacturing (excluding 3331 & 3332)	94.3	A	4.7	A	9.7	A	13.5	A	35.2	B	36.9	B
Computer and Peripheral Equipment Manufacturing	93.0	A	19.4	B	5.0	A	16.3	B	16.0	B	43.3	B
Communications Equipment Manufacturing	100.0	A	1.7	A	7.7	A	12.0	B	43.5	B	35.1	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	90.2	A	0.0	A	2.5	A	14.5	A	41.4	B	41.6	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	86.5	A	5.4	A	11.4	A	14.2	B	34.4	B	34.5	B
Electrical Equipment, Appliance and Component Manufacturing	95.6	A	2.5	A	11.7	A	13.0	A	35.3	A	37.4	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	95.0	A	0.5	A	2.0	A	16.9	A	32.9	B	47.8	B
Aerospace Product and Parts Manufacturing	96.6	A	0.0	A	5.5	A	10.5	A	32.1	B	51.9	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	91.0	B	0.0	A	8.9	A	17.7	B	35.1	B	38.3	B
Furniture and Related Products Manufacturing	96.7	A	4.2	A	3.0	A	17.2	A	30.2	A	45.4	A
Miscellaneous Manufacturing	96.1	A	4.7	A	8.8	A	12.9	A	32.1	B	41.5	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.1

Objectives of Innovation During the Period 1997-1999

Objective by Industry

Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
To improve production flexibility												
Total Manufacturing Industries	94.3	A	4.6	A	7.6	A	18.3	A	32.9	A	36.6	A
Food Manufacturing	93.4	A	6.7	A	8.9	A	20.9	A	30.4	A	33.1	A
Beverage and Tobacco Product Manufacturing	97.1	A	2.9	A	5.6	A	10.5	A	47.7	A	33.3	A
Textile Mills	96.4	A	5.4	A	8.4	A	11.8	A	26.6	A	47.9	A
Textile Product Mills	84.1	A	5.7	A	12.1	B	20.3	B	32.8	B	29.1	B
Clothing Manufacturing	91.0	A	0.7	A	4.5	A	21.8	A	33.3	A	39.7	A
Leather and Allied Product Manufacturing	100.0	A	3.6	A	10.5	A	27.6	B	24.6	B	33.6	B
Sawmills and Wood Preservation	96.4	A	4.3	A	7.8	A	18.7	A	32.7	A	36.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.4	A	11.1	A	13.7	A	12.9	A	33.7	B	28.6	B
Other Wood Product Manufacturing	94.6	A	6.6	A	9.1	A	14.3	A	36.1	A	33.9	A
Paper Manufacturing	95.6	A	5.1	A	5.3	A	18.4	A	35.9	A	35.4	A
Printing and Related Support Activities	98.7	A	1.1	A	2.7	A	11.8	A	37.6	B	46.8	B
Petroleum and Coal Products Manufacturing	87.8	A	5.6	A	5.6	A	33.3	A	33.3	A	22.2	A
Chemical Manufacturing (excluding 3254)	89.9	A	8.0	A	11.4	A	20.5	A	31.2	A	28.8	A
Pharmaceutical and Medicine Manufacturing (3254)	96.3	A	2.2	A	9.1	A	24.3	A	25.6	B	38.8	B
Plastics and Rubber Products Manufacturing	96.1	A	3.1	A	7.0	A	19.0	A	32.3	A	38.7	A
Non-Metallic Mineral Products Manufacturing	89.1	A	13.5	A	6.7	A	22.9	A	27.3	A	29.7	A
Primary Metal Manufacturing	95.4	A	2.9	A	6.7	A	24.8	A	31.5	A	34.0	A
Fabricated Metal Product Manufacturing	96.2	A	3.3	A	7.9	A	19.0	A	30.2	A	39.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	90.5	A	6.5	A	6.8	A	23.1	A	34.5	A	29.1	A
Machinery Manufacturing (excluding 3331 & 3332)	93.5	A	4.3	A	8.0	A	14.9	A	32.6	A	40.3	B
Computer and Peripheral Equipment Manufacturing	93.0	A	22.5	B	5.0	A	16.3	B	24.0	B	32.3	B
Communications Equipment Manufacturing	100.0	A	0.0	A	11.2	A	22.6	A	44.2	B	22.0	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	90.2	A	6.0	A	2.5	A	23.0	B	29.5	B	39.0	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	91.3	A	8.3	A	13.5	A	18.5	A	41.4	B	18.3	B
Electrical Equipment, Appliance and Component Manufacturing	94.7	A	3.1	A	8.2	A	16.7	A	29.8	A	42.2	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	95.3	A	2.4	A	6.4	A	18.6	A	33.9	B	38.7	B
Aerospace Product and Parts Manufacturing	96.6	A	0.0	A	5.5	A	4.0	A	52.0	B	38.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	97.9	A	5.7	A	3.8	A	21.3	B	37.2	B	32.0	B
Furniture and Related Products Manufacturing	95.7	A	3.0	A	4.0	A	17.8	A	35.4	A	39.8	A
Miscellaneous Manufacturing	93.2	A	5.9	A	13.0	A	15.6	A	32.6	B	32.8	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.1

Objectives of Innovation During the Period 1997-1999

Objective by Industry

Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
To extend product range												
Total Manufacturing Industries	94.0	A	3.4	A	5.3	A	15.2	A	29.4	A	46.8	A
Food Manufacturing	96.2	A	2.3	A	4.2	A	14.7	A	32.9	A	46.0	A
Beverage and Tobacco Product Manufacturing	94.3	A	8.4	A	1.6	A	8.0	A	25.3	A	56.7	A
Textile Mills	98.6	A	3.8	A	2.3	A	16.0	A	24.7	A	53.2	A
Textile Product Mills	94.8	A	5.2	B	10.4	B	9.2	B	30.8	B	44.4	B
Clothing Manufacturing	88.5	A	0.3	A	4.7	A	17.9	A	27.3	A	49.8	A
Leather and Allied Product Manufacturing	96.7	A	0.0	A	7.1	A	18.0	B	35.4	B	39.4	B
Sawmills and Wood Preservation	89.9	A	7.7	A	5.8	A	20.3	A	24.6	A	41.6	A
Veneer, Plywood and Engineered Wood Product Manufacturing	94.5	A	7.5	A	3.5	A	11.5	A	21.6	A	55.9	B
Other Wood Product Manufacturing	88.1	A	1.2	A	3.9	A	16.0	A	31.1	A	47.8	B
Paper Manufacturing	94.8	A	2.4	A	9.1	A	16.9	A	26.6	A	44.9	A
Printing and Related Support Activities	94.8	A	0.6	A	9.7	A	16.4	A	25.1	B	48.2	B
Petroleum and Coal Products Manufacturing	92.7	A	0.0	A	10.5	A	15.8	A	23.7	A	50.0	A
Chemical Manufacturing (excluding 3254)	94.2	A	3.4	A	2.4	A	11.5	A	35.8	A	46.9	A
Pharmaceutical and Medicine Manufacturing (3254)	94.4	A	7.8	A	2.2	A	5.9	A	37.5	B	46.5	B
Plastics and Rubber Products Manufacturing	98.3	A	0.9	A	4.6	A	11.7	A	31.9	A	50.9	A
Non-Metallic Mineral Products Manufacturing	93.4	A	3.2	A	3.6	A	14.9	A	28.7	A	49.6	A
Primary Metal Manufacturing	84.8	A	1.8	A	6.2	A	31.0	A	27.4	A	33.6	A
Fabricated Metal Product Manufacturing	93.0	A	7.4	A	8.4	A	14.9	A	25.8	A	43.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	96.3	A	2.3	A	3.0	A	9.0	A	28.6	A	57.0	A
Machinery Manufacturing (excluding 3331 & 3332)	93.5	A	2.7	A	4.3	A	12.4	A	40.4	B	40.2	B
Computer and Peripheral Equipment Manufacturing	97.7	A	0.0	A	4.8	A	4.8	A	24.2	B	66.3	B
Communications Equipment Manufacturing	97.4	A	1.7	A	1.7	A	14.7	A	36.5	B	45.4	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	93.4	A	2.4	A	0.0	A	16.8	A	41.7	B	39.0	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	93.4	A	3.0	A	2.9	A	11.1	A	32.3	B	50.8	B
Electrical Equipment, Appliance and Component Manufacturing	96.4	A	2.8	A	4.9	A	9.8	A	37.1	A	45.4	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	94.6	A	2.0	A	7.9	A	24.2	A	20.6	A	45.3	B
Aerospace Product and Parts Manufacturing	92.7	A	4.4	A	4.2	A	21.7	B	34.3	B	35.4	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	98.3	A	6.7	B	1.8	A	16.5	B	21.5	B	53.5	B
Furniture and Related Products Manufacturing	93.2	A	6.0	A	1.3	A	21.9	A	27.2	A	43.7	A
Miscellaneous Manufacturing	96.8	A	3.1	A	5.3	A	12.7	A	23.0	B	55.9	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.1
Objectives of Innovation During the Period 1997-1999
Objective by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
To improve product quality												
Total Manufacturing Industries	96.3	A	1.4	A	2.7	A	10.2	A	31.6	A	54.1	A
Food Manufacturing	95.3	A	1.1	A	3.6	A	7.5	A	32.3	A	55.5	A
Beverage and Tobacco Product Manufacturing	94.9	A	6.2	A	1.5	A	12.3	A	32.8	A	47.0	A
Textile Mills	96.5	A	1.6	A	2.3	A	7.5	A	29.2	A	59.4	A
Textile Product Mills	96.5	A	5.7	B	0.0	A	15.7	A	30.9	B	47.6	B
Clothing Manufacturing	92.3	A	0.4	A	1.3	A	14.7	A	23.9	A	59.7	A
Leather and Allied Product Manufacturing	100.0	A	1.8	A	8.4	A	7.2	A	22.2	B	60.4	B
Sawmills and Wood Preservation	95.9	A	2.7	A	3.6	A	8.5	A	25.4	A	59.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.5	A	3.4	A	4.6	A	11.4	A	23.7	B	56.8	B
Other Wood Product Manufacturing	92.9	A	0.5	A	1.0	A	13.6	A	27.9	A	57.0	B
Paper Manufacturing	96.8	A	0.9	A	1.8	A	7.3	A	31.1	A	58.8	A
Printing and Related Support Activities	99.3	A	0.6	A	2.9	A	8.0	A	31.5	B	57.0	B
Petroleum and Coal Products Manufacturing	90.2	A	2.7	A	0.0	A	13.5	A	40.5	A	43.2	A
Chemical Manufacturing (excluding 3254)	95.2	A	2.7	A	3.6	A	10.8	A	29.8	A	53.1	A
Pharmaceutical and Medicine Manufacturing (3254)	94.4	A	4.8	A	4.5	A	4.2	A	43.8	B	42.8	B
Plastics and Rubber Products Manufacturing	96.5	A	0.6	A	4.0	A	9.5	A	32.0	A	53.9	A
Non-Metallic Mineral Products Manufacturing	94.2	A	2.4	A	2.2	A	6.9	A	34.7	A	53.7	A
Primary Metal Manufacturing	96.1	A	1.9	A	3.5	A	10.9	A	28.7	A	54.9	A
Fabricated Metal Product Manufacturing	97.9	A	1.1	A	2.1	A	12.4	A	33.3	A	51.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	98.5	A	0.6	A	0.6	A	11.5	A	33.6	A	53.8	A
Machinery Manufacturing (excluding 3331 & 3332)	94.3	A	1.6	A	3.6	A	9.5	A	38.5	B	46.8	B
Computer and Peripheral Equipment Manufacturing	97.7	A	0.0	A	2.4	A	10.3	B	23.2	B	64.1	B
Communications Equipment Manufacturing	97.4	A	1.7	A	1.7	A	21.4	B	29.0	A	46.3	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	95.6	A	0.0	A	2.4	A	10.1	A	48.0	B	39.5	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	92.4	A	1.1	A	5.9	A	17.3	A	28.0	B	47.7	B
Electrical Equipment, Appliance and Component Manufacturing	97.6	A	0.0	A	3.2	A	14.8	A	33.0	A	49.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	98.4	A	2.3	A	0.0	A	8.8	A	27.0	A	61.9	B
Aerospace Product and Parts Manufacturing	95.1	A	0.0	A	0.0	A	13.2	A	29.4	B	57.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	93.0	A	0.0	A	2.2	A	13.6	B	23.3	B	60.8	B
Furniture and Related Products Manufacturing	96.6	A	1.1	A	2.8	A	7.3	A	42.1	A	46.7	A
Miscellaneous Manufacturing	98.9	A	1.1	A	2.7	A	8.5	A	23.0	B	64.7	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.1

Objectives of Innovation During the Period 1997-1999

Objective by Industry

Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
To increase speed of delivering products to the market												
Total Manufacturing Industries	93.6	A	5.6	A	7.9	A	18.5	A	25.6	A	42.4	A
Food Manufacturing	92.9	A	6.3	A	13.3	A	28.7	A	26.1	A	25.7	A
Beverage and Tobacco Product Manufacturing	90.2	A	9.6	A	17.0	A	11.6	A	24.1	A	37.6	A
Textile Mills	97.2	A	3.1	A	5.9	A	18.4	A	32.7	A	39.8	A
Textile Product Mills	94.4	A	3.6	A	3.0	A	24.3	B	32.0	B	37.1	B
Clothing Manufacturing	88.9	A	0.4	A	4.1	A	19.7	A	20.6	A	55.3	A
Leather and Allied Product Manufacturing	100.0	A	3.6	A	3.6	A	22.2	B	36.3	B	34.2	B
Sawmills and Wood Preservation	90.8	A	21.8	A	16.4	A	17.3	A	22.1	A	22.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	92.4	A	9.9	A	7.9	A	29.0	B	20.3	B	32.9	B
Other Wood Product Manufacturing	85.1	A	8.9	A	10.2	A	20.6	A	18.0	A	42.4	B
Paper Manufacturing	89.8	A	11.9	A	16.4	A	16.1	A	20.9	A	34.7	A
Printing and Related Support Activities	98.2	A	0.9	A	1.3	A	13.5	A	26.1	A	58.2	B
Petroleum and Coal Products Manufacturing	87.8	A	16.7	A	11.1	A	38.9	A	22.2	A	11.1	A
Chemical Manufacturing (excluding 3254)	87.6	A	8.4	A	13.0	A	22.8	A	29.5	A	26.4	A
Pharmaceutical and Medicine Manufacturing (3254)	90.7	A	9.6	A	9.6	A	18.3	B	19.2	B	43.2	B
Plastics and Rubber Products Manufacturing	96.5	A	4.6	A	6.3	A	21.6	A	26.4	A	41.1	A
Non-Metallic Mineral Products Manufacturing	88.1	A	5.9	A	12.4	A	10.8	A	25.1	A	45.7	A
Primary Metal Manufacturing	88.7	A	2.8	A	12.1	A	21.6	A	23.4	A	40.1	A
Fabricated Metal Product Manufacturing	95.0	A	4.1	A	5.7	A	16.7	A	26.8	A	46.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	94.6	A	13.0	A	9.5	A	23.4	A	21.1	A	33.0	A
Machinery Manufacturing (excluding 3331 & 3332)	93.6	A	6.0	A	4.1	A	14.9	A	28.1	A	46.8	B
Computer and Peripheral Equipment Manufacturing	97.7	A	2.4	A	7.1	A	21.0	B	21.6	B	47.8	B
Communications Equipment Manufacturing	100.0	A	1.7	A	8.4	A	22.3	B	37.5	B	30.0	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	95.6	A	5.6	A	5.6	A	9.1	A	16.0	A	63.6	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	90.5	A	1.0	A	9.6	A	29.4	B	24.8	A	35.1	B
Electrical Equipment, Appliance and Component Manufacturing	96.7	A	2.5	A	8.9	A	15.3	A	22.2	A	51.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	96.8	A	3.5	A	5.9	A	17.2	A	29.3	A	44.1	B
Aerospace Product and Parts Manufacturing	96.4	A	0.0	A	9.3	A	8.1	A	34.2	B	48.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	91.0	B	8.9	A	6.8	A	8.7	A	34.5	B	41.2	B
Furniture and Related Products Manufacturing	96.7	A	2.8	A	4.5	A	12.1	A	26.9	A	53.8	A
Miscellaneous Manufacturing	97.7	A	8.7	A	7.2	A	14.2	A	20.8	B	49.1	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.1

Objectives of Innovation During the Period 1997-1999

Objective by Industry

Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
To replace products being phased out												
Total Manufacturing Industries	82.8	A	16.8	A	16.7	A	22.0	A	21.6	A	23.0	A
Food Manufacturing	85.1	A	16.9	A	21.2	A	24.7	A	21.8	A	15.5	A
Beverage and Tobacco Product Manufacturing	77.5	A	14.7	A	16.9	A	24.7	A	14.0	A	29.6	A
Textile Mills	92.7	A	11.1	A	16.0	A	17.7	A	30.5	A	24.6	A
Textile Product Mills	83.7	B	12.5	B	17.8	B	18.8	B	30.0	B	20.9	B
Clothing Manufacturing	78.1	A	10.1	A	9.0	A	21.0	A	18.3	A	41.7	A
Leather and Allied Product Manufacturing	92.8	B	1.9	A	15.2	B	18.8	B	18.4	B	45.6	B
Sawmills and Wood Preservation	68.4	A	37.6	A	19.4	A	20.0	A	7.1	A	15.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing	65.6	B	27.3	B	28.3	B	21.8	B	7.0	A	15.6	B
Other Wood Product Manufacturing	72.8	A	21.5	A	16.1	A	33.0	B	11.8	A	17.6	A
Paper Manufacturing	80.4	A	28.2	A	19.9	A	18.0	A	15.0	A	19.0	A
Printing and Related Support Activities	82.6	A	17.8	A	19.1	A	23.3	B	16.6	A	23.3	B
Petroleum and Coal Products Manufacturing	82.9	A	23.5	A	5.9	A	23.5	A	32.4	A	14.7	A
Chemical Manufacturing (excluding 3254)	83.4	A	10.4	A	19.6	A	16.7	A	31.0	A	22.2	A
Pharmaceutical and Medicine Manufacturing (3254)	84.3	A	6.6	A	18.6	A	6.9	A	29.2	B	38.6	B
Plastics and Rubber Products Manufacturing	90.6	A	12.3	A	16.8	A	23.1	A	20.1	A	27.8	A
Non-Metallic Mineral Products Manufacturing	76.2	A	30.3	A	14.3	A	18.8	A	16.4	A	20.2	A
Primary Metal Manufacturing	75.3	A	16.8	A	29.5	A	23.7	A	14.0	A	16.0	A
Fabricated Metal Product Manufacturing	80.3	A	24.8	A	13.9	A	21.6	A	24.0	A	15.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	85.8	A	15.1	A	14.3	A	16.6	A	25.4	A	28.7	A
Machinery Manufacturing (excluding 3331 & 3332)	81.7	A	18.4	A	14.0	A	27.1	B	24.6	A	15.9	A
Computer and Peripheral Equipment Manufacturing	86.6	B	2.7	A	5.8	B	16.8	B	29.8	B	45.0	B
Communications Equipment Manufacturing	98.3	A	3.4	A	16.9	A	27.4	B	33.9	A	18.4	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	87.0	A	5.3	A	10.0	A	12.8	A	29.1	B	42.8	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	85.5	A	5.5	A	8.7	A	23.9	A	34.5	B	27.5	B
Electrical Equipment, Appliance and Component Manufacturing	90.8	A	9.8	A	16.9	A	19.7	A	26.4	A	27.2	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	83.9	A	8.6	A	10.0	A	27.7	B	19.7	A	33.9	B
Aerospace Product and Parts Manufacturing	82.4	B	8.8	A	32.3	B	17.4	B	23.0	B	18.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	80.9	B	31.1	B	13.2	B	21.5	B	20.7	B	13.5	B
Furniture and Related Products Manufacturing	84.1	A	14.3	A	15.6	A	19.7	A	21.8	A	28.6	A
Miscellaneous Manufacturing	91.1	A	11.7	A	22.9	B	21.0	A	19.8	A	24.6	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.1
Objectives of Innovation During the Period 1997-1999
Objective by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
To reduce materials consumption												
Total Manufacturing Industries	82.5	A	18.3	A	17.3	A	21.7	A	21.5	A	21.2	A
Food Manufacturing	79.1	A	25.0	A	22.8	A	26.2	A	15.5	A	10.5	A
Beverage and Tobacco Product Manufacturing	90.1	A	14.9	A	12.1	A	24.8	A	34.6	A	13.5	A
Textile Mills	85.2	A	22.4	A	12.2	A	22.7	A	21.1	A	21.7	A
Textile Product Mills	77.0	B	23.9	B	24.2	B	18.8	B	18.9	B	14.1	B
Clothing Manufacturing	73.8	A	13.6	A	15.2	A	23.3	A	19.7	A	28.3	A
Leather and Allied Product Manufacturing	94.9	A	16.1	B	20.3	B	14.6	B	21.5	B	27.5	B
Sawmills and Wood Preservation	87.0	A	14.9	A	7.1	A	9.7	A	22.3	A	46.1	A
Veneer, Plywood and Engineered Wood Product Manufacturing	84.6	A	15.5	A	7.0	A	11.9	A	19.0	B	46.6	B
Other Wood Product Manufacturing	81.1	A	15.1	A	13.4	A	20.5	A	20.0	A	31.0	B
Paper Manufacturing	86.4	A	17.4	A	12.7	A	20.1	A	19.0	A	30.9	A
Printing and Related Support Activities	86.4	A	19.5	A	8.9	A	21.6	A	24.3	B	25.7	B
Petroleum and Coal Products Manufacturing	92.7	A	15.8	A	13.2	A	31.6	A	23.7	A	15.8	A
Chemical Manufacturing (excluding 3254)	81.3	A	21.0	A	20.4	A	24.1	A	22.3	A	12.1	A
Pharmaceutical and Medicine Manufacturing (3254)	74.2	A	22.2	B	43.2	B	7.5	A	14.2	B	12.9	A
Plastics and Rubber Products Manufacturing	84.9	A	12.3	A	13.9	A	19.8	A	27.0	A	27.0	A
Non-Metallic Mineral Products Manufacturing	83.2	A	23.6	A	13.6	A	21.3	A	15.8	A	25.6	A
Primary Metal Manufacturing	83.6	A	17.7	A	21.1	A	19.9	A	22.9	A	18.4	A
Fabricated Metal Product Manufacturing	77.4	A	18.1	A	20.5	A	21.8	A	17.2	A	22.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	84.2	A	29.1	A	16.4	A	22.2	A	13.2	A	19.1	A
Machinery Manufacturing (excluding 3331 & 3332)	81.6	A	23.7	A	23.4	A	19.7	A	23.2	B	10.1	A
Computer and Peripheral Equipment Manufacturing	76.4	B	45.9	B	18.8	B	20.1	B	9.1	A	6.1	A
Communications Equipment Manufacturing	86.2	A	9.9	A	15.1	A	38.6	B	30.1	B	6.2	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	73.8	B	18.0	B	17.7	B	27.0	A	25.1	B	12.2	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	79.7	A	17.6	B	25.0	B	21.7	B	20.6	A	15.2	B
Electrical Equipment, Appliance and Component Manufacturing	88.4	A	11.0	A	19.8	A	13.0	A	26.7	A	29.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	90.4	A	11.9	A	17.8	A	21.6	A	26.2	A	22.5	A
Aerospace Product and Parts Manufacturing	81.4	B	11.9	B	22.4	B	27.7	B	19.9	B	18.2	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	77.2	B	24.3	B	29.0	B	15.3	B	22.0	B	9.3	B
Furniture and Related Products Manufacturing	85.7	A	12.6	A	16.0	A	23.7	A	26.8	A	20.9	A
Miscellaneous Manufacturing	86.2	A	14.4	A	14.6	A	27.7	B	27.8	B	15.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.1
Objectives of Innovation During the Period 1997-1999
Objective by Industry
Canada, Innovators in Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
To reduce environmental damage												
Total Manufacturing Industries	74.7	A	24.8	A	19.5	A	22.5	A	17.2	A	16.0	A
Food Manufacturing	75.8	A	24.8	A	22.3	A	23.8	A	17.8	A	11.2	A
Beverage and Tobacco Product Manufacturing	66.6	A	14.6	A	25.9	A	23.4	A	23.8	A	12.4	A
Textile Mills	70.4	A	26.7	A	10.3	A	19.7	A	19.5	A	23.8	A
Textile Product Mills	68.7	B	29.9	B	33.3	B	11.6	B	15.8	B	9.4	B
Clothing Manufacturing	62.3	A	34.4	A	16.0	A	18.0	A	12.6	A	19.0	A
Leather and Allied Product Manufacturing	89.8	A	31.8	B	11.0	B	18.7	B	11.7	A	26.8	B
Sawmills and Wood Preservation	74.2	A	19.3	A	11.4	A	21.9	A	19.7	A	27.6	A
Veneer, Plywood and Engineered Wood Product Manufacturing	72.6	A	21.7	B	16.0	A	11.0	A	27.0	B	24.3	B
Other Wood Product Manufacturing	66.1	A	36.8	B	11.6	A	25.1	B	13.7	A	12.8	A
Paper Manufacturing	77.1	A	25.9	A	18.8	A	16.4	A	19.3	A	19.5	A
Printing and Related Support Activities	79.1	A	30.9	B	13.2	A	29.5	B	14.7	A	11.7	A
Petroleum and Coal Products Manufacturing	95.1	A	17.9	A	5.1	A	30.8	A	23.1	A	23.1	A
Chemical Manufacturing (excluding 3254)	84.2	A	13.1	A	16.8	A	18.1	A	27.7	A	24.3	A
Pharmaceutical and Medicine Manufacturing (3254)	61.8	B	39.0	B	19.3	B	21.9	A	10.7	A	9.1	A
Plastics and Rubber Products Manufacturing	79.3	A	18.7	A	19.2	A	21.5	A	24.0	A	16.6	A
Non-Metallic Mineral Products Manufacturing	75.0	A	24.6	A	11.9	A	21.6	A	14.5	A	27.4	A
Primary Metal Manufacturing	82.1	A	16.9	A	16.1	A	25.5	A	16.7	A	24.8	A
Fabricated Metal Product Manufacturing	70.0	A	23.6	A	20.0	A	27.5	B	12.1	A	16.8	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	78.5	A	26.4	A	17.6	A	15.9	A	20.9	A	19.3	A
Machinery Manufacturing (excluding 3331 & 3332)	69.5	A	26.7	B	31.3	B	17.9	B	15.2	A	8.8	A
Computer and Peripheral Equipment Manufacturing	67.2	B	44.7	B	30.5	B	14.4	B	3.5	A	6.9	A
Communications Equipment Manufacturing	70.8	B	32.0	B	35.8	B	22.7	B	7.2	A	2.3	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	75.9	B	29.0	B	20.2	B	17.5	B	18.9	A	14.3	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	69.6	B	30.3	B	26.7	B	19.0	A	17.5	B	6.4	A
Electrical Equipment, Appliance and Component Manufacturing	81.6	A	23.9	A	23.2	A	23.9	A	16.9	A	12.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	81.8	A	18.2	A	20.5	A	23.7	B	20.4	A	17.3	A
Aerospace Product and Parts Manufacturing	79.2	B	16.3	B	34.9	B	16.2	B	9.2	A	23.5	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	79.5	B	31.3	B	7.3	A	23.2	B	29.9	B	8.3	B
Furniture and Related Products Manufacturing	75.2	A	24.4	A	20.2	A	26.9	B	16.9	A	11.6	A
Miscellaneous Manufacturing	73.2	A	28.2	B	22.2	B	23.0	B	13.4	A	13.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.1

Objectives of Innovation During the Period 1997-1999

Objective by Industry

Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
To reduce energy consumption												
Total Manufacturing Industries	79.9	A	24.3	A	21.4	A	25.6	A	16.7	A	12.0	A
Food Manufacturing	81.0	A	21.0	A	22.6	A	31.0	A	17.1	A	8.2	A
Beverage and Tobacco Product Manufacturing	88.6	A	11.6	A	17.8	A	30.0	A	27.4	A	13.1	A
Textile Mills	84.2	A	29.0	A	16.7	A	21.2	A	14.3	A	18.8	A
Textile Product Mills	68.9	B	35.4	B	27.3	B	17.0	B	14.8	B	5.4	B
Clothing Manufacturing	68.7	A	30.4	A	16.9	A	23.8	A	10.4	A	18.6	A
Leather and Allied Product Manufacturing	88.0	A	23.9	B	16.7	B	31.4	B	19.8	B	8.2	B
Sawmills and Wood Preservation	81.6	A	26.2	A	11.6	A	25.9	A	19.5	A	16.8	A
Veneer, Plywood and Engineered Wood Product Manufacturing	79.1	A	20.1	B	26.6	B	16.5	B	26.6	B	10.1	A
Other Wood Product Manufacturing	77.7	A	29.9	A	21.9	A	25.6	B	16.2	A	6.4	A
Paper Manufacturing	85.0	A	32.0	A	15.1	A	23.8	A	11.8	A	17.3	A
Printing and Related Support Activities	82.3	A	31.4	B	22.0	B	29.4	B	11.3	A	5.9	A
Petroleum and Coal Products Manufacturing	90.2	A	18.9	A	5.4	A	32.4	A	37.8	A	5.4	A
Chemical Manufacturing (excluding 3254)	81.7	A	17.2	A	30.7	A	19.7	A	18.3	A	14.1	A
Pharmaceutical and Medicine Manufacturing (3254)	70.3	B	36.2	B	22.7	B	30.5	B	2.7	A	8.0	A
Plastics and Rubber Products Manufacturing	83.6	A	18.4	A	20.5	A	22.2	A	23.2	A	15.6	A
Non-Metallic Mineral Products Manufacturing	81.1	A	20.3	A	14.5	A	20.0	A	20.9	A	24.3	A
Primary Metal Manufacturing	85.7	A	18.1	A	15.8	A	26.7	A	22.9	A	16.5	A
Fabricated Metal Product Manufacturing	75.9	A	25.5	A	20.6	A	28.0	B	13.3	A	12.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	83.2	A	36.0	A	14.2	A	22.2	A	17.8	A	9.8	A
Machinery Manufacturing (excluding 3331 & 3332)	78.5	A	23.7	A	23.8	A	23.2	B	20.0	A	9.4	A
Computer and Peripheral Equipment Manufacturing	67.1	B	43.9	B	35.3	B	10.4	A	3.5	A	6.9	A
Communications Equipment Manufacturing	79.5	B	18.9	A	48.6	B	24.8	B	5.6	B	2.1	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	78.2	B	35.1	B	22.3	B	22.9	A	8.8	A	11.0	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	75.2	A	24.6	B	29.4	B	26.1	A	16.4	B	3.5	A
Electrical Equipment, Appliance and Component Manufacturing	86.5	A	21.6	A	23.1	A	22.8	A	16.5	A	16.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	87.3	A	13.9	A	22.3	A	23.8	A	22.3	A	17.7	A
Aerospace Product and Parts Manufacturing	81.4	B	13.9	B	36.6	B	26.4	B	11.2	B	11.9	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	69.4	B	27.1	B	8.4	A	25.8	B	36.3	B	2.5	A
Furniture and Related Products Manufacturing	80.1	A	23.8	A	22.4	A	31.8	B	13.3	A	8.8	A
Miscellaneous Manufacturing	77.5	A	25.2	B	26.4	B	26.4	B	13.9	A	8.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

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Objectives of Innovation During the Period 1997-1999
Objective by Industry
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
To deal with or to respond to new government regulations												
Total Manufacturing Industries	71.0	A	31.3	A	20.6	A	23.0	A	13.1	A	12.1	A
Food Manufacturing	77.2	A	24.3	A	21.2	A	25.4	A	14.5	A	14.6	A
Beverage and Tobacco Product Manufacturing	78.1	A	22.4	A	24.1	A	13.5	A	23.5	A	16.4	A
Textile Mills	64.3	A	38.6	B	22.0	A	24.0	A	5.7	A	9.6	A
Textile Product Mills	64.0	B	49.3	B	21.6	B	12.7	B	12.1	B	4.2	A
Clothing Manufacturing	57.1	A	28.5	A	17.0	A	24.2	A	10.8	A	19.5	A
Leather and Allied Product Manufacturing	79.3	B	41.3	B	8.7	B	26.9	B	8.3	A	14.8	B
Sawmills and Wood Preservation	74.3	A	22.9	A	15.7	A	26.7	A	15.5	A	19.2	A
Veneer, Plywood and Engineered Wood Product Manufacturing	60.6	B	44.8	B	20.8	B	17.7	B	14.1	B	2.6	A
Other Wood Product Manufacturing	65.0	A	37.5	B	13.2	A	29.9	B	6.6	A	12.8	A
Paper Manufacturing	70.9	A	36.0	A	21.6	A	15.3	A	16.9	A	10.2	A
Printing and Related Support Activities	69.6	B	38.1	B	20.7	B	27.0	B	8.1	A	6.1	A
Petroleum and Coal Products Manufacturing	78.0	A	9.4	A	6.3	A	34.4	A	21.9	A	28.1	A
Chemical Manufacturing (excluding 3254)	78.8	A	16.0	A	20.7	A	24.6	A	22.9	A	15.9	A
Pharmaceutical and Medicine Manufacturing (3254)	71.9	B	20.3	B	8.5	A	17.7	A	35.0	B	18.5	A
Plastics and Rubber Products Manufacturing	74.3	A	31.4	A	21.2	A	26.4	A	13.5	A	7.6	A
Non-Metallic Mineral Products Manufacturing	72.3	A	27.8	A	14.6	A	21.3	A	17.9	A	18.4	A
Primary Metal Manufacturing	71.0	A	26.5	A	19.3	A	24.0	A	12.5	A	17.7	A
Fabricated Metal Product Manufacturing	66.5	A	31.1	B	21.7	A	23.4	B	11.4	A	12.3	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	76.9	A	38.2	A	20.2	A	19.9	A	10.4	A	11.4	A
Machinery Manufacturing (excluding 3331 & 3332)	65.3	A	37.9	B	20.3	B	22.3	B	11.9	A	7.6	A
Computer and Peripheral Equipment Manufacturing	70.0	B	68.7	B	7.5	B	10.0	A	7.2	B	6.6	A
Communications Equipment Manufacturing	81.1	B	12.4	A	43.4	B	28.4	B	13.7	A	2.0	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	73.9	B	32.7	B	28.0	B	18.2	A	18.2	B	2.9	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	69.4	B	28.3	B	35.8	B	9.1	A	18.7	A	8.1	A
Electrical Equipment, Appliance and Component Manufacturing	78.8	A	36.3	B	18.3	A	20.2	A	11.8	A	13.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	82.3	A	21.5	A	23.2	A	26.2	B	11.1	A	18.0	A
Aerospace Product and Parts Manufacturing	67.0	B	16.9	B	37.6	B	16.3	B	18.7	B	10.4	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	68.0	B	26.4	B	14.0	B	14.9	B	14.9	B	29.8	B
Furniture and Related Products Manufacturing	70.9	A	39.0	B	24.0	A	22.0	A	8.5	A	6.5	A
Miscellaneous Manufacturing	72.7	A	40.7	B	20.0	B	19.0	B	11.5	A	8.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2

Objectives of Innovation During the Period 1997-1999

Industry by Objective

Canada, Innovators in Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries												
Productivity												
To reduce labour costs	93.7	A	9.9	A	9.6	A	17.9	A	25.4	A	37.3	A
To increase production capacity	95.6	A	4.2	A	6.0	A	11.0	A	29.3	A	49.5	A
To reduce production time	93.7	A	6.1	A	7.3	A	15.4	A	30.1	A	41.1	A
To improve production flexibility	94.3	A	4.6	A	7.6	A	18.3	A	32.9	A	36.6	A
Product												
To extend product range	94.0	A	3.4	A	5.3	A	15.2	A	29.4	A	46.8	A
To improve product quality	96.3	A	1.4	A	2.7	A	10.2	A	31.6	A	54.1	A
To increase speed of delivering products to the market	93.6	A	5.6	A	7.9	A	18.5	A	25.6	A	42.4	A
To replace products being phased out	82.8	A	16.8	A	16.7	A	22.0	A	21.6	A	23.0	A
Other												
To reduce materials consumption	82.5	A	18.3	A	17.3	A	21.7	A	21.5	A	21.2	A
To reduce environmental damage	74.7	A	24.8	A	19.5	A	22.5	A	17.2	A	16.0	A
To reduce energy consumption	79.9	A	24.3	A	21.4	A	25.6	A	16.7	A	12.0	A
To deal with or to respond to new government regulations	71.0	A	31.3	A	20.6	A	23.0	A	13.1	A	12.1	A
Food Manufacturing												
Productivity												
To reduce labour costs	94.2	A	10.5	A	9.1	A	17.3	A	26.5	A	36.6	A
To increase production capacity	97.1	A	5.3	A	7.1	A	11.8	A	29.7	A	46.1	A
To reduce production time	92.6	A	8.7	A	12.5	A	19.4	A	28.8	A	30.7	A
To improve production flexibility	93.4	A	6.7	A	8.9	A	20.9	A	30.4	A	33.1	A
Product												
To extend product range	96.2	A	2.3	A	4.2	A	14.7	A	32.9	A	46.0	A
To improve product quality	95.3	A	1.1	A	3.6	A	7.5	A	32.3	A	55.5	A
To increase speed of delivering products to the market	92.9	A	6.3	A	13.3	A	28.7	A	26.1	A	25.7	A
To replace products being phased out	85.1	A	16.9	A	21.2	A	24.7	A	21.8	A	15.5	A
Other												
To reduce materials consumption	79.1	A	25.0	A	22.8	A	26.2	A	15.5	A	10.5	A
To reduce environmental damage	75.8	A	24.8	A	22.3	A	23.8	A	17.8	A	11.2	A
To reduce energy consumption	81.0	A	21.0	A	22.6	A	31.0	A	17.1	A	8.2	A
To deal with or to respond to new government regulations	77.2	A	24.3	A	21.2	A	25.4	A	14.5	A	14.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2
Objectives of Innovation During the Period 1997-1999
Industry by Objective
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Beverage and Tobacco Product Manufacturing												
Productivity												
To reduce labour costs	89.6	A	9.9	A	8.3	A	8.5	A	31.7	A	41.6	A
To increase production capacity	95.8	A	4.7	A	9.1	A	6.0	A	25.6	A	54.5	A
To reduce production time	90.9	A	9.7	A	12.2	A	19.0	A	26.4	A	32.8	A
To improve production flexibility	97.1	A	2.9	A	5.6	A	10.5	A	47.7	A	33.3	A
Product												
To extend product range	94.3	A	8.4	A	1.6	A	8.0	A	25.3	A	56.7	A
To improve product quality	94.9	A	6.2	A	1.5	A	12.3	A	32.8	A	47.0	A
To increase speed of delivering products to the market	90.2	A	9.6	A	17.0	A	11.6	A	24.1	A	37.6	A
To replace products being phased out	77.5	A	14.7	A	16.9	A	24.7	A	14.0	A	29.6	A
Other												
To reduce materials consumption	90.1	A	14.9	A	12.1	A	24.8	A	34.6	A	13.5	A
To reduce environmental damage	86.6	A	14.6	A	25.9	A	23.4	A	23.8	A	12.4	A
To reduce energy consumption	88.6	A	11.6	A	17.8	A	30.0	A	27.4	A	13.1	A
To deal with or to respond to new government regulations	78.1	A	22.4	A	24.1	A	13.5	A	23.5	A	16.4	A
Textile Mills												
Productivity												
To reduce labour costs	91.0	A	10.6	A	11.7	A	17.9	A	26.4	A	33.5	A
To increase production capacity	100.0	A	7.5	A	2.9	A	16.7	A	26.9	A	46.0	A
To reduce production time	98.6	A	8.2	A	7.5	A	15.5	A	28.4	A	40.4	A
To improve production flexibility	96.4	A	5.4	A	8.4	A	11.8	A	26.6	A	47.9	A
Product												
To extend product range	98.6	A	3.8	A	2.3	A	16.0	A	24.7	A	53.2	A
To improve product quality	96.5	A	1.6	A	2.3	A	7.5	A	29.2	A	59.4	A
To increase speed of delivering products to the market	97.2	A	3.1	A	5.9	A	18.4	A	32.7	A	39.8	A
To replace products being phased out	92.7	A	11.1	A	16.0	A	17.7	A	30.5	A	24.6	A
Other												
To reduce materials consumption	85.2	A	22.4	A	12.2	A	22.7	A	21.1	A	21.7	A
To reduce environmental damage	70.4	A	26.7	A	10.3	A	19.7	A	19.5	A	23.8	A
To reduce energy consumption	84.2	A	29.0	A	16.7	A	21.2	A	14.3	A	18.8	A
To deal with or to respond to new government regulations	64.3	A	38.6	B	22.0	A	24.0	A	5.7	A	9.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2
Objectives of Innovation During the Period 1997-1999
Industry by Objective
Canada, Innovators in Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Textile Product Mills												
Productivity												
To reduce labour costs	99.1	A	9.4	B	3.3	A	9.9	B	37.4	B	40.0	B
To increase production capacity	86.3	A	3.3	A	1.9	A	10.1	B	29.1	B	55.6	B
To reduce production time	85.6	A	2.2	A	3.0	A	22.1	B	34.8	B	37.9	B
To improve production flexibility	84.1	A	5.7	A	12.1	B	20.3	B	32.8	B	29.1	B
Product												
To extend product range	94.8	A	5.2	B	10.4	B	9.2	B	30.8	B	44.4	B
To improve product quality	96.5	A	5.7	B	0.0	A	15.7	A	30.9	B	47.6	B
To increase speed of delivering products to the market	94.4	A	3.6	A	3.0	A	24.3	B	32.0	B	37.1	B
To replace products being phased out	83.7	B	12.5	B	17.8	B	18.8	B	30.0	B	20.9	B
Other												
To reduce materials consumption	77.0	B	23.9	B	24.2	B	18.8	B	18.9	B	14.1	B
To reduce environmental damage	68.7	B	29.9	B	33.3	B	11.6	B	15.8	B	9.4	B
To reduce energy consumption	68.9	B	35.4	B	27.3	B	17.0	B	14.8	B	5.4	B
To deal with or to respond to new government regulations	64.0	B	49.3	B	21.6	B	12.7	B	12.1	B	4.2	A
Clothing Manufacturing												
Productivity												
To reduce labour costs	89.0	A	8.2	A	8.7	A	21.1	A	17.2	A	44.8	A
To increase production capacity	91.8	A	2.8	A	4.6	A	17.5	A	19.3	A	55.8	A
To reduce production time	90.6	A	4.9	A	3.9	A	22.9	A	22.6	A	45.6	A
To improve production flexibility	91.0	A	0.7	A	4.5	A	21.8	A	33.3	A	39.7	A
Product												
To extend product range	88.5	A	0.3	A	4.7	A	17.9	A	27.3	A	49.8	A
To improve product quality	92.3	A	0.4	A	1.3	A	14.7	A	23.9	A	59.7	A
To increase speed of delivering products to the market	88.9	A	0.4	A	4.1	A	19.7	A	20.6	A	55.3	A
To replace products being phased out	78.1	A	10.1	A	9.0	A	21.0	A	18.3	A	41.7	A
Other												
To reduce materials consumption	73.8	A	13.6	A	15.2	A	23.3	A	19.7	A	28.3	A
To reduce environmental damage	62.3	A	34.4	A	16.0	A	18.0	A	12.6	A	19.0	A
To reduce energy consumption	68.7	A	30.4	A	16.9	A	23.8	A	10.4	A	18.6	A
To deal with or to respond to new government regulations	57.1	A	28.5	A	17.0	A	24.2	A	10.8	A	19.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2
Objectives of Innovation During the Period 1997-1999
Industry by Objective
Canada, Innovators in Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Leather and Allied Product Manufacturing												
Productivity												
To reduce labour costs	92.8	A	12.9	A	20.1	B	9.7	B	27.8	B	29.4	B
To increase production capacity	100.0	A	10.8	B	12.0	B	10.5	B	26.4	B	40.2	B
To reduce production time	98.2	A	10.7	A	8.9	A	8.9	A	32.7	B	38.8	B
To improve production flexibility	100.0	A	3.6	A	10.5	A	27.6	B	24.6	B	33.6	B
Product												
To extend product range	96.7	A	0.0	A	7.1	A	18.0	B	35.4	B	39.4	B
To improve product quality	100.0	A	1.8	A	8.4	A	7.2	A	22.2	B	60.4	B
To increase speed of delivering products to the market	100.0	A	3.6	A	3.6	A	22.2	B	36.3	B	34.2	B
To replace products being phased out	92.8	B	1.9	A	15.2	B	18.8	B	18.4	B	45.6	B
Other												
To reduce materials consumption	94.9	A	16.1	B	20.3	B	14.6	B	21.5	B	27.5	B
To reduce environmental damage	89.8	A	31.8	B	11.0	B	18.7	B	11.7	A	26.8	B
To reduce energy consumption	88.0	A	23.9	B	16.7	B	31.4	B	19.8	B	8.2	B
To deal with or to respond to new government regulations	79.3	B	41.3	B	8.7	B	26.9	B	8.3	A	14.8	B
Sawmills and Wood Preservation												
Productivity												
To reduce labour costs	95.2	A	14.7	A	10.4	A	13.6	A	25.2	A	36.1	A
To increase production capacity	98.3	A	8.0	A	3.1	A	5.9	A	28.8	A	54.2	A
To reduce production time	88.7	A	20.2	A	9.5	A	13.0	A	19.6	A	37.7	A
To improve production flexibility	96.4	A	4.3	A	7.8	A	18.7	A	32.7	A	36.5	A
Product												
To extend product range	89.9	A	7.7	A	5.8	A	20.3	A	24.6	A	41.6	A
To improve product quality	95.9	A	2.7	A	3.6	A	8.5	A	25.4	A	59.9	A
To increase speed of delivering products to the market	90.8	A	21.8	A	16.4	A	17.3	A	22.1	A	22.5	A
To replace products being phased out	68.4	A	37.6	A	19.4	A	20.0	A	7.1	A	15.9	A
Other												
To reduce materials consumption	87.0	A	14.9	A	7.1	A	9.7	A	22.3	A	46.1	A
To reduce environmental damage	74.2	A	19.3	A	11.4	A	21.9	A	19.7	A	27.6	A
To reduce energy consumption	81.6	A	26.2	A	11.6	A	25.9	A	19.5	A	16.8	A
To deal with or to respond to new government regulations	74.3	A	22.9	A	15.7	A	26.7	A	15.5	A	19.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2
Objectives of Innovation During the Period 1997-1999
Industry by Objective
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Veneer, Plywood and Engineered Wood Product Manufacturing												
Productivity												
To reduce labour costs	95.3	A	11.2	A	10.5	A	28.6	B	19.6	A	30.0	B
To increase production capacity	100.0	A	6.3	A	4.6	A	4.6	A	20.8	A	63.7	B
To reduce production time	93.8	A	11.6	A	8.0	A	10.6	A	29.3	B	40.5	B
To improve production flexibility	98.4	A	11.1	A	13.7	A	12.9	A	33.7	B	28.6	B
Product												
To extend product range	94.5	A	7.5	A	3.5	A	11.5	A	21.6	A	55.9	B
To improve product quality	98.5	A	3.4	A	4.6	A	11.4	A	23.7	B	56.8	B
To increase speed of delivering products to the market	92.4	A	9.9	A	7.9	A	29.0	B	20.3	B	32.9	B
To replace products being phased out	65.6	B	27.3	B	28.3	B	21.8	B	7.0	A	15.6	B
Other												
To reduce materials consumption	84.6	A	15.5	A	7.0	A	11.9	A	19.0	B	46.6	B
To reduce environmental damage	72.6	A	21.7	B	16.0	A	11.0	A	27.0	B	24.3	B
To reduce energy consumption	79.1	A	20.1	B	26.6	B	16.5	B	26.6	B	10.1	A
To deal with or to respond to new government regulations	60.6	B	44.8	B	20.8	B	17.7	B	14.1	B	2.6	A
Other Wood Product Manufacturing												
Productivity												
To reduce labour costs	89.5	A	6.9	A	7.7	A	18.7	A	27.1	A	39.6	B
To increase production capacity	94.6	A	2.9	A	7.9	A	9.8	A	28.6	A	50.8	B
To reduce production time	88.3	A	6.8	A	8.9	A	15.9	A	32.5	A	36.0	B
To improve production flexibility	94.6	A	6.6	A	9.1	A	14.3	A	36.1	A	33.9	A
Product												
To extend product range	88.1	A	1.2	A	3.9	A	16.0	A	31.1	A	47.8	B
To improve product quality	92.9	A	0.5	A	1.0	A	13.6	A	27.9	A	57.0	B
To increase speed of delivering products to the market	85.1	A	8.9	A	10.2	A	20.6	A	18.0	A	42.4	B
To replace products being phased out	72.8	A	21.5	A	16.1	A	33.0	B	11.8	A	17.6	A
Other												
To reduce materials consumption	81.1	A	15.1	A	13.4	A	20.5	A	20.0	A	31.0	B
To reduce environmental damage	66.1	A	36.8	B	11.6	A	25.1	B	13.7	A	12.8	A
To reduce energy consumption	77.7	A	29.9	A	21.9	A	25.6	B	16.2	A	6.4	A
To deal with or to respond to new government regulations	65.0	A	37.5	B	13.2	A	29.9	B	6.6	A	12.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2
Objectives of Innovation During the Period 1997-1999
Industry by Objective
Canada, Innovators in Manufacturing

			Importance									
	Relevant		Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Paper Manufacturing												
Productivity												
To reduce labour costs	91.9	A	15.6	A	10.1	A	18.9	A	17.7	A	37.7	A
To increase production capacity	97.2	A	7.3	A	5.3	A	12.2	A	23.0	A	52.3	A
To reduce production time	91.0	A	12.2	A	9.3	A	15.6	A	24.3	A	38.7	A
To improve production flexibility	95.6	A	5.1	A	5.3	A	18.4	A	35.9	A	35.4	A
Product												
To extend product range	94.8	A	2.4	A	9.1	A	16.9	A	26.6	A	44.9	A
To improve product quality	96.8	A	0.9	A	1.8	A	7.3	A	31.1	A	58.8	A
To increase speed of delivering products to the market	89.8	A	11.9	A	16.4	A	16.1	A	20.9	A	34.7	A
To replace products being phased out	80.4	A	28.2	A	19.9	A	18.0	A	15.0	A	19.0	A
Other												
To reduce materials consumption	86.4	A	17.4	A	12.7	A	20.1	A	19.0	A	30.9	A
To reduce environmental damage	77.1	A	25.9	A	18.8	A	16.4	A	19.3	A	19.5	A
To reduce energy consumption	85.0	A	32.0	A	15.1	A	23.8	A	11.8	A	17.3	A
To deal with or to respond to new government regulations	70.9	A	36.0	A	21.6	A	15.3	A	16.9	A	10.2	A
Printing and Related Support Activities												
Productivity												
To reduce labour costs	96.8	A	10.2	A	9.8	A	20.5	A	27.0	A	32.5	B
To increase production capacity	99.0	A	0.9	A	2.9	A	6.0	A	32.3	B	57.9	B
To reduce production time	99.0	A	0.6	A	3.1	A	12.4	A	26.9	A	56.9	B
To improve production flexibility	98.7	A	1.1	A	2.7	A	11.8	A	37.6	B	46.8	B
Product												
To extend product range	94.8	A	0.6	A	9.7	A	16.4	A	25.1	B	48.2	B
To improve product quality	99.3	A	0.6	A	2.9	A	8.0	A	31.5	B	57.0	B
To increase speed of delivering products to the market	98.2	A	0.9	A	1.3	A	13.5	A	26.1	A	58.2	B
To replace products being phased out	82.6	A	17.8	A	19.1	A	23.3	B	16.6	A	23.3	B
Other												
To reduce materials consumption	86.4	A	19.5	A	8.9	A	21.6	A	24.3	B	25.7	B
To reduce environmental damage	79.1	A	30.9	B	13.2	A	29.5	B	14.7	A	11.7	A
To reduce energy consumption	82.3	A	31.4	B	22.0	B	29.4	B	11.3	A	5.9	A
To deal with or to respond to new government regulations	69.6	B	38.1	B	20.7	B	27.0	B	8.1	A	6.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2

Objectives of Innovation During the Period 1997-1999

Industry by Objective

Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing												
Productivity												
To reduce labour costs	90.2	A	18.9	A	16.2	A	32.4	A	24.3	A	8.1	A
To increase production capacity	95.1	A	2.6	A	2.6	A	25.6	A	41.0	A	28.2	A
To reduce production time	82.9	A	11.8	A	8.8	A	38.2	A	29.4	A	11.8	A
To improve production flexibility	87.8	A	5.6	A	5.6	A	33.3	A	33.3	A	22.2	A
Product												
To extend product range	92.7	A	0.0	A	10.5	A	15.8	A	23.7	A	50.0	A
To improve product quality	90.2	A	2.7	A	0.0	A	13.5	A	40.5	A	43.2	A
To increase speed of delivering products to the market	87.8	A	16.7	A	11.1	A	38.9	A	22.2	A	11.1	A
To replace products being phased out	82.9	A	23.5	A	5.9	A	23.5	A	32.4	A	14.7	A
Other												
To reduce materials consumption	92.7	A	15.8	A	13.2	A	31.6	A	23.7	A	15.8	A
To reduce environmental damage	95.1	A	17.9	A	5.1	A	30.8	A	23.1	A	23.1	A
To reduce energy consumption	90.2	A	18.9	A	5.4	A	32.4	A	37.8	A	5.4	A
To deal with or to respond to new government regulations	78.0	A	9.4	A	6.3	A	34.4	A	21.9	A	28.1	A
Chemical Manufacturing (excluding 3254)												
Productivity												
To reduce labour costs	90.0	A	17.2	A	11.7	A	18.0	A	26.4	A	26.7	A
To increase production capacity	92.8	A	7.3	A	6.4	A	10.1	A	31.4	A	44.8	A
To reduce production time	87.1	A	11.1	A	11.6	A	17.4	A	30.3	A	29.6	A
To improve production flexibility	89.9	A	8.0	A	11.4	A	20.5	A	31.2	A	28.8	A
Product												
To extend product range	94.2	A	3.4	A	2.4	A	11.5	A	35.8	A	46.9	A
To improve product quality	95.2	A	2.7	A	3.6	A	10.8	A	29.8	A	53.1	A
To increase speed of delivering products to the market	87.6	A	8.4	A	13.0	A	22.8	A	29.5	A	26.4	A
To replace products being phased out	83.4	A	10.4	A	19.6	A	16.7	A	31.0	A	22.2	A
Other												
To reduce materials consumption	81.3	A	21.0	A	20.4	A	24.1	A	22.3	A	12.1	A
To reduce environmental damage	84.2	A	13.1	A	16.8	A	18.1	A	27.7	A	24.3	A
To reduce energy consumption	81.7	A	17.2	A	30.7	A	19.7	A	18.3	A	14.1	A
To deal with or to respond to new government regulations	78.8	A	16.0	A	20.7	A	24.6	A	22.9	A	15.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2
Objectives of Innovation During the Period 1997-1999
Industry by Objective
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Pharmaceutical and Medicine Manufacturing (3254)												
Productivity												
To reduce labour costs	88.9	A	12.8	A	14.5	A	10.5	A	17.0	A	45.3	B
To increase production capacity	96.3	A	2.2	A	12.4	A	9.1	A	38.1	B	38.2	B
To reduce production time	96.3	A	2.9	A	8.5	A	22.0	A	26.4	A	40.2	B
To improve production flexibility	96.3	A	2.2	A	9.1	A	24.3	A	25.6	B	38.8	B
Product												
To extend product range	94.4	A	7.8	A	2.2	A	5.9	A	37.5	B	46.5	B
To improve product quality	94.4	A	4.8	A	4.5	A	4.2	A	43.8	B	42.8	B
To increase speed of delivering products to the market	90.7	A	9.6	A	9.6	A	18.3	B	19.2	B	43.2	B
To replace products being phased out	84.3	A	6.6	A	18.6	A	6.9	A	29.2	B	38.6	B
Other												
To reduce materials consumption	74.2	A	22.2	B	43.2	B	7.5	A	14.2	B	12.9	A
To reduce environmental damage	61.8	B	39.0	B	19.3	B	21.9	A	10.7	A	9.1	A
To reduce energy consumption	70.3	B	36.2	B	22.7	B	30.5	B	2.7	A	8.0	A
To deal with or to respond to new government regulations	71.9	B	20.3	B	8.5	A	17.7	A	35.0	B	18.5	A
Plastics and Rubber Products Manufacturing												
Productivity												
To reduce labour costs	95.2	A	10.1	A	9.4	A	18.0	A	24.3	A	38.1	A
To increase production capacity	95.8	A	3.6	A	2.8	A	11.8	A	29.4	A	52.4	A
To reduce production time	95.7	A	5.4	A	4.8	A	15.3	A	34.7	A	39.8	A
To improve production flexibility	96.1	A	3.1	A	7.0	A	19.0	A	32.3	A	38.7	A
Product												
To extend product range	98.3	A	0.9	A	4.6	A	11.7	A	31.9	A	50.9	A
To improve product quality	96.5	A	0.6	A	4.0	A	9.5	A	32.0	A	53.9	A
To increase speed of delivering products to the market	96.5	A	4.6	A	6.3	A	21.6	A	26.4	A	41.1	A
To replace products being phased out	90.6	A	12.3	A	16.8	A	23.1	A	20.1	A	27.8	A
Other												
To reduce materials consumption	84.9	A	12.3	A	13.9	A	19.8	A	27.0	A	27.0	A
To reduce environmental damage	79.3	A	18.7	A	19.2	A	21.5	A	24.0	A	16.6	A
To reduce energy consumption	83.6	A	18.4	A	20.5	A	22.2	A	23.2	A	15.6	A
To deal with or to respond to new government regulations	74.3	A	31.4	A	21.2	A	26.4	A	13.5	A	7.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2

Objectives of Innovation During the Period 1997-1999

Industry by Objective

Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Non-Metallic Mineral Products Manufacturing												
Productivity												
To reduce labour costs	91.4	A	15.6	A	11.3	A	13.6	A	23.7	A	35.8	A
To increase production capacity	92.4	A	9.5	A	6.3	A	8.4	A	24.2	A	51.7	A
To reduce production time	90.9	A	14.5	A	6.7	A	14.2	A	24.9	A	39.7	A
To improve production flexibility	89.1	A	13.5	A	6.7	A	22.9	A	27.3	A	29.7	A
Product												
To extend product range	93.4	A	3.2	A	3.6	A	14.9	A	28.7	A	49.6	A
To improve product quality	94.2	A	2.4	A	2.2	A	6.9	A	34.7	A	53.7	A
To increase speed of delivering products to the market	88.1	A	5.9	A	12.4	A	10.8	A	25.1	A	45.7	A
To replace products being phased out	76.2	A	30.3	A	14.3	A	18.8	A	16.4	A	20.2	A
Other												
To reduce materials consumption	83.2	A	23.6	A	13.6	A	21.3	A	15.8	A	25.6	A
To reduce environmental damage	75.0	A	24.6	A	11.9	A	21.6	A	14.5	A	27.4	A
To reduce energy consumption	81.1	A	20.3	A	14.5	A	20.0	A	20.9	A	24.3	A
To deal with or to respond to new government regulations	72.3	A	27.8	A	14.6	A	21.3	A	17.9	A	18.4	A
Primary Metal Manufacturing												
Productivity												
To reduce labour costs	96.3	A	5.0	A	5.1	A	14.0	A	30.7	A	45.2	A
To increase production capacity	96.3	A	1.3	A	5.0	A	10.9	A	24.9	A	57.9	A
To reduce production time	96.9	A	7.9	A	4.5	A	10.6	A	31.9	A	45.1	A
To improve production flexibility	95.4	A	2.9	A	6.7	A	24.8	A	31.5	A	34.0	A
Product												
To extend product range	84.8	A	1.8	A	6.2	A	31.0	A	27.4	A	33.6	A
To improve product quality	96.1	A	1.9	A	3.5	A	10.9	A	28.7	A	54.9	A
To increase speed of delivering products to the market	88.7	A	2.8	A	12.1	A	21.6	A	23.4	A	40.1	A
To replace products being phased out	75.3	A	16.8	A	29.5	A	23.7	A	14.0	A	16.0	A
Other												
To reduce materials consumption	83.6	A	17.7	A	21.1	A	19.9	A	22.9	A	18.4	A
To reduce environmental damage	82.1	A	16.9	A	16.1	A	25.5	A	16.7	A	24.8	A
To reduce energy consumption	85.7	A	18.1	A	15.8	A	26.7	A	22.9	A	16.5	A
To deal with or to respond to new government regulations	71.0	A	26.5	A	19.3	A	24.0	A	12.5	A	17.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2
Objectives of Innovation During the Period 1997-1999
Industry by Objective
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing												
Productivity												
To reduce labour costs	94.7	A	7.3	A	9.2	A	17.1	A	26.9	A	39.4	A
To increase production capacity	96.9	A	2.2	A	4.3	A	9.2	A	29.0	A	55.4	A
To reduce production time	96.5	A	3.5	A	6.2	A	10.9	A	31.1	A	48.4	A
To improve production flexibility	96.2	A	3.3	A	7.9	A	19.0	A	30.2	A	39.6	A
Product												
To extend product range	93.0	A	7.4	A	8.4	A	14.9	A	25.8	A	43.4	A
To improve product quality	97.9	A	1.1	A	2.1	A	12.4	A	33.3	A	51.1	A
To increase speed of delivering products to the market	95.0	A	4.1	A	5.7	A	16.7	A	26.8	A	46.7	A
To replace products being phased out	80.3	A	24.8	A	13.9	A	21.6	A	24.0	A	15.7	A
Other												
To reduce materials consumption	77.4	A	18.1	A	20.5	A	21.8	A	17.2	A	22.4	A
To reduce environmental damage	70.0	A	23.6	A	20.0	A	27.5	B	12.1	A	16.8	A
To reduce energy consumption	75.9	A	25.5	A	20.6	A	28.0	B	13.3	A	12.7	A
To deal with or to respond to new government regulations	66.5	A	31.1	B	21.7	A	23.4	B	11.4	A	12.3	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)												
Productivity												
To reduce labour costs	93.2	A	10.9	A	14.2	A	20.9	A	24.4	A	29.7	A
To increase production capacity	92.0	A	6.6	A	13.9	A	16.5	A	25.9	A	37.1	A
To reduce production time	91.2	A	6.0	A	7.1	A	22.1	A	26.8	A	38.0	A
To improve production flexibility	90.5	A	6.5	A	6.8	A	23.1	A	34.5	A	29.1	A
Product												
To extend product range	96.3	A	2.3	A	3.0	A	9.0	A	28.6	A	57.0	A
To improve product quality	98.5	A	0.6	A	0.6	A	11.5	A	33.6	A	53.8	A
To increase speed of delivering products to the market	94.6	A	13.0	A	9.5	A	23.4	A	21.1	A	33.0	A
To replace products being phased out	85.8	A	15.1	A	14.3	A	16.6	A	25.4	A	28.7	A
Other												
To reduce materials consumption	84.2	A	29.1	A	16.4	A	22.2	A	13.2	A	19.1	A
To reduce environmental damage	78.5	A	26.4	A	17.6	A	15.9	A	20.9	A	19.3	A
To reduce energy consumption	83.2	A	36.0	A	14.2	A	22.2	A	17.8	A	9.8	A
To deal with or to respond to new government regulations	76.9	A	38.2	A	20.2	A	19.9	A	10.4	A	11.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2
Objectives of Innovation During the Period 1997-1999
Industry by Objective
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)												
Productivity												
To reduce labour costs	94.2	A	8.4	A	11.5	A	21.1	A	28.6	A	30.4	B
To increase production capacity	94.3	A	4.6	A	7.3	A	10.9	A	37.2	B	40.1	B
To reduce production time	94.3	A	4.7	A	9.7	A	13.5	A	35.2	B	36.9	B
To improve production flexibility	93.5	A	4.3	A	8.0	A	14.9	A	32.6	A	40.3	B
Product												
To extend product range	93.5	A	2.7	A	4.3	A	12.4	A	40.4	B	40.2	B
To improve product quality	94.3	A	1.6	A	3.6	A	9.5	A	38.5	B	46.8	B
To increase speed of delivering products to the market	93.6	A	6.0	A	4.1	A	14.9	A	28.1	A	46.8	B
To replace products being phased out	81.7	A	18.4	A	14.0	A	27.1	B	24.6	A	15.9	A
Other												
To reduce materials consumption	81.6	A	23.7	A	23.4	A	19.7	A	23.2	B	10.1	A
To reduce environmental damage	69.5	A	26.7	B	31.3	B	17.9	B	15.2	A	8.8	A
To reduce energy consumption	78.5	A	23.7	A	23.8	A	23.2	B	20.0	A	9.4	A
To deal with or to respond to new government regulations	65.3	A	37.9	B	20.3	B	22.3	B	11.9	A	7.6	A
Computer and Peripheral Equipment Manufacturing												
Productivity												
To reduce labour costs	93.0	A	24.4	B	19.6	B	10.4	A	18.5	B	27.1	B
To increase production capacity	93.0	A	7.5	A	10.4	A	22.7	B	18.5	B	40.8	B
To reduce production time	93.0	A	19.4	B	5.0	A	16.3	B	16.0	B	43.3	B
To improve production flexibility	93.0	A	22.5	B	5.0	A	16.3	B	24.0	B	32.3	B
Product												
To extend product range	97.7	A	0.0	A	4.8	A	4.8	A	24.2	B	66.3	B
To improve product quality	97.7	A	0.0	A	2.4	A	10.3	B	23.2	B	64.1	B
To increase speed of delivering products to the market	97.7	A	2.4	A	7.1	A	21.0	B	21.6	B	47.8	B
To replace products being phased out	86.6	B	2.7	A	5.8	B	16.8	B	29.8	B	45.0	B
Other												
To reduce materials consumption	76.4	B	45.9	B	18.8	B	20.1	B	9.1	A	6.1	A
To reduce environmental damage	67.2	B	44.7	B	30.5	B	14.4	B	3.5	A	6.9	A
To reduce energy consumption	67.1	B	43.9	B	35.3	B	10.4	A	3.5	A	6.9	A
To deal with or to respond to new government regulations	70.0	B	68.7	B	7.5	B	10.0	A	7.2	B	6.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2
Objectives of Innovation During the Period 1997-1999
Industry by Objective
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Communications Equipment Manufacturing												
Productivity												
To reduce labour costs	97.4	A	1.7	A	5.2	A	25.8	B	40.8	B	26.5	B
To increase production capacity	98.2	A	3.4	A	11.2	A	18.3	A	37.5	B	29.6	B
To reduce production time	100.0	A	1.7	A	7.7	A	12.0	B	43.5	B	35.1	B
To improve production flexibility	100.0	A	0.0	A	11.2	A	22.6	A	44.2	B	22.0	B
Product												
To extend product range	97.4	A	1.7	A	1.7	A	14.7	A	36.5	B	45.4	B
To improve product quality	97.4	A	1.7	A	1.7	A	21.4	B	29.0	A	46.3	B
To increase speed of delivering products to the market	100.0	A	1.7	A	8.4	A	22.3	B	37.5	B	30.0	B
To replace products being phased out	98.3	A	3.4	A	16.9	A	27.4	B	33.9	A	18.4	A
Other												
To reduce materials consumption	86.2	A	9.9	A	15.1	A	38.6	B	30.1	B	6.2	A
To reduce environmental damage	70.8	B	32.0	B	35.8	B	22.7	B	7.2	A	2.3	A
To reduce energy consumption	79.5	B	18.9	A	48.6	B	24.8	B	5.6	B	2.1	A
To deal with or to respond to new government regulations	81.1	B	12.4	A	43.4	B	28.4	B	13.7	A	2.0	A
Audio and Video Equipment Manufacturing												
Productivity												
To reduce labour costs	x	A	x	A	x	A	x	A	x	A	x	A
To increase production capacity	x	A	x	A	x	A	x	A	x	A	x	A
To reduce production time	x	A	x	A	x	A	x	A	x	A	x	A
To improve production flexibility	x	A	x	A	x	A	x	A	x	A	x	A
Product												
To extend product range	x	A	x	A	x	A	x	A	x	A	x	A
To improve product quality	x	A	x	A	x	A	x	A	x	A	x	A
To increase speed of delivering products to the market	x	A	x	A	x	A	x	A	x	A	x	A
To replace products being phased out	x	A	x	A	x	A	x	A	x	A	x	A
Other												
To reduce materials consumption	x	A	x	A	x	A	x	A	x	A	x	A
To reduce environmental damage	x	A	x	A	x	A	x	A	x	A	x	A
To reduce energy consumption	x	A	x	A	x	A	x	A	x	A	x	A
To deal with or to respond to new government regulations	x	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2

Objectives of Innovation During the Period 1997-1999

Industry by Objective

Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing												
Productivity												
To reduce labour costs	90.2	A	0.0	A	10.0	A	19.4	B	35.3	B	35.3	B
To increase production capacity	90.2	A	0.0	A	8.3	A	17.3	B	35.3	B	39.0	B
To reduce production time	90.2	A	0.0	A	2.5	A	14.5	A	41.4	B	41.6	B
To improve production flexibility	90.2	A	6.0	A	2.5	A	23.0	B	29.5	B	39.0	B
Product												
To extend product range	93.4	A	2.4	A	0.0	A	16.8	A	41.7	B	39.0	B
To improve product quality	95.6	A	0.0	A	2.4	A	10.1	A	48.0	B	39.5	A
To increase speed of delivering products to the market	95.6	A	5.6	A	5.6	A	9.1	A	16.0	A	63.6	B
To replace products being phased out	87.0	A	5.3	A	10.0	A	12.8	A	29.1	B	42.8	B
Other												
To reduce materials consumption	73.8	B	18.0	B	17.7	B	27.0	A	25.1	B	12.2	A
To reduce environmental damage	75.9	B	29.0	B	20.2	B	17.5	B	18.9	A	14.3	B
To reduce energy consumption	78.2	B	35.1	B	22.3	B	22.9	A	8.8	A	11.0	B
To deal with or to respond to new government regulations	73.9	B	32.7	B	28.0	B	18.2	A	18.2	B	2.9	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media												
Productivity												
To reduce labour costs	90.4	A	9.7	A	11.9	A	16.6	A	24.5	A	37.4	B
To increase production capacity	86.7	A	11.1	A	8.9	A	16.1	B	34.6	B	29.3	B
To reduce production time	86.5	A	5.4	A	11.4	A	14.2	B	34.4	B	34.5	B
To improve production flexibility	91.3	A	8.3	A	13.5	A	18.5	A	41.4	B	18.3	B
Product												
To extend product range	93.4	A	3.0	A	2.9	A	11.1	A	32.3	B	50.8	B
To improve product quality	92.4	A	1.1	A	5.9	A	17.3	A	28.0	B	47.7	B
To increase speed of delivering products to the market	90.5	A	1.0	A	9.6	A	29.4	B	24.8	A	35.1	B
To replace products being phased out	85.5	A	5.5	A	8.7	A	23.9	A	34.5	B	27.5	B
Other												
To reduce materials consumption	79.7	A	17.6	B	25.0	B	21.7	B	20.6	A	15.2	B
To reduce environmental damage	69.6	B	30.3	B	26.7	B	19.0	A	17.5	B	6.4	A
To reduce energy consumption	75.2	A	24.6	B	29.4	B	26.1	A	16.4	B	3.5	A
To deal with or to respond to new government regulations	69.4	B	28.3	B	35.8	B	9.1	A	18.7	A	8.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2
Objectives of Innovation During the Period 1997-1999
Industry by Objective
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Electrical Equipment, Appliance and Component Manufacturing												
Productivity												
To reduce labour costs	96.4	A	8.5	A	10.1	A	19.3	A	24.0	A	38.2	A
To increase production capacity	95.4	A	3.3	A	12.2	A	21.8	A	28.5	A	34.1	A
To reduce production time	95.6	A	2.5	A	11.7	A	13.0	A	35.3	A	37.4	A
To improve production flexibility	94.7	A	3.1	A	8.2	A	16.7	A	29.8	A	42.2	A
Product												
To extend product range	96.4	A	2.8	A	4.9	A	9.8	A	37.1	A	45.4	A
To improve product quality	97.6	A	0.0	A	3.2	A	14.8	A	33.0	A	49.0	A
To increase speed of delivering products to the market	96.7	A	2.5	A	8.9	A	15.3	A	22.2	A	51.1	A
To replace products being phased out	90.8	A	9.8	A	16.9	A	19.7	A	26.4	A	27.2	A
Other												
To reduce materials consumption	88.4	A	11.0	A	19.8	A	13.0	A	26.7	A	29.5	A
To reduce environmental damage	81.6	A	23.9	A	23.2	A	23.9	A	16.9	A	12.1	A
To reduce energy consumption	86.5	A	21.6	A	23.1	A	22.8	A	16.5	A	16.0	A
To deal with or to respond to new government regulations	78.8	A	36.3	B	18.3	A	20.2	A	11.8	A	13.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing												
Productivity												
To reduce labour costs	93.6	A	4.3	A	9.7	A	13.2	A	29.9	A	42.9	B
To increase production capacity	95.7	A	1.2	A	5.3	A	14.0	A	27.1	A	52.4	B
To reduce production time	95.0	A	0.5	A	2.0	A	16.9	A	32.9	B	47.8	B
To improve production flexibility	95.3	A	2.4	A	6.4	A	18.6	A	33.9	B	38.7	B
Product												
To extend product range	94.6	A	2.0	A	7.9	A	24.2	A	20.6	A	45.3	B
To improve product quality	98.4	A	2.3	A	0.0	A	8.8	A	27.0	A	61.9	B
To increase speed of delivering products to the market	96.8	A	3.5	A	5.9	A	17.2	A	29.3	A	44.1	B
To replace products being phased out	83.9	A	8.6	A	10.0	A	27.7	B	19.7	A	33.9	B
Other												
To reduce materials consumption	90.4	A	11.9	A	17.8	A	21.6	A	26.2	A	22.5	A
To reduce environmental damage	81.8	A	18.2	A	20.5	A	23.7	B	20.4	A	17.3	A
To reduce energy consumption	87.3	A	13.9	A	22.3	A	23.8	A	22.3	A	17.7	A
To deal with or to respond to new government regulations	82.3	A	21.5	A	23.2	A	26.2	B	11.1	A	18.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2

Objectives of Innovation During the Period 1997-1999

Industry by Objective

Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Aerospace Product and Parts Manufacturing												
Productivity												
To reduce labour costs	93.4	A	7.7	A	5.7	A	12.7	A	31.4	B	42.4	B
To increase production capacity	98.3	A	3.9	A	7.4	A	3.7	A	36.9	B	48.0	B
To reduce production time	96.6	A	0.0	A	5.5	A	10.5	A	32.1	B	51.9	B
To improve production flexibility	96.6	A	0.0	A	5.5	A	4.0	A	52.0	B	38.5	B
Product												
To extend product range	92.7	A	4.4	A	4.2	A	21.7	B	34.3	B	35.4	B
To improve product quality	95.1	A	0.0	A	0.0	A	13.2	A	29.4	B	57.5	B
To increase speed of delivering products to the market	96.4	A	0.0	A	9.3	A	8.1	A	34.2	B	48.5	B
To replace products being phased out	82.4	B	8.8	A	32.3	B	17.4	B	23.0	B	18.5	B
Other												
To reduce materials consumption	81.4	B	11.9	B	22.4	B	27.7	B	19.9	B	18.2	B
To reduce environmental damage	79.2	B	16.3	B	34.9	B	16.2	B	9.2	A	23.5	B
To reduce energy consumption	81.4	B	13.9	B	36.6	B	26.4	B	11.2	B	11.9	B
To deal with or to respond to new government regulations	67.0	B	16.9	B	37.6	B	16.3	B	18.7	B	10.4	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment												
Productivity												
To reduce labour costs	91.0	B	9.3	A	5.3	B	21.1	B	27.7	B	36.5	B
To increase production capacity	97.9	A	1.8	A	5.3	A	3.6	A	45.5	B	43.8	B
To reduce production time	91.0	B	0.0	A	8.9	A	17.7	B	35.1	B	38.3	B
To improve production flexibility	97.9	A	5.7	A	3.8	A	21.3	B	37.2	B	32.0	B
Product												
To extend product range	98.3	A	6.7	B	1.8	A	16.5	B	21.5	B	53.5	B
To improve product quality	93.0	A	0.0	A	2.2	A	13.6	B	23.3	B	60.8	B
To increase speed of delivering products to the market	91.0	B	8.9	A	6.8	A	8.7	A	34.5	B	41.2	B
To replace products being phased out	80.9	B	31.1	B	13.2	B	21.5	B	20.7	B	13.5	B
Other												
To reduce materials consumption	77.2	B	24.3	B	29.0	B	15.3	B	22.0	B	9.3	B
To reduce environmental damage	79.5	B	31.3	B	7.3	A	23.2	B	29.9	B	8.3	B
To reduce energy consumption	69.4	B	27.1	B	8.4	A	25.8	B	36.3	B	2.5	A
To deal with or to respond to new government regulations	68.0	B	26.4	B	14.0	B	14.9	B	14.9	B	29.8	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 9.2
Objectives of Innovation During the Period 1997-1999
Industry by Objective
Canada, Innovators in Manufacturing

	Relevant		Importance									
			Low		Moderately Low		Medium		Moderately High		High	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing												
Productivity												
To reduce labour costs	96.5	A	8.0	A	6.3	A	17.9	A	21.5	A	46.3	A
To increase production capacity	97.6	A	2.8	A	2.4	A	9.3	A	29.8	A	55.6	A
To reduce production time	96.7	A	4.2	A	3.0	A	17.2	A	30.2	A	45.4	A
To improve production flexibility	95.7	A	3.0	A	4.0	A	17.8	A	35.4	A	39.8	A
Product												
To extend product range	93.2	A	6.0	A	1.3	A	21.9	A	27.2	A	43.7	A
To improve product quality	96.6	A	1.1	A	2.8	A	7.3	A	42.1	A	46.7	A
To increase speed of delivering products to the market	96.7	A	2.8	A	4.5	A	12.1	A	26.9	A	53.8	A
To replace products being phased out	84.1	A	14.3	A	15.6	A	19.7	A	21.8	A	28.6	A
Other												
To reduce materials consumption	85.7	A	12.6	A	16.0	A	23.7	A	26.8	A	20.9	A
To reduce environmental damage	75.2	A	24.4	A	20.2	A	26.9	B	16.9	A	11.6	A
To reduce energy consumption	80.1	A	23.8	A	22.4	A	31.8	B	13.3	A	8.8	A
To deal with or to respond to new government regulations	70.9	A	39.0	B	24.0	A	22.0	A	8.5	A	6.5	A
Miscellaneous Manufacturing												
Productivity												
To reduce labour costs	93.8	A	10.3	A	7.8	A	18.9	A	17.8	A	45.3	B
To increase production capacity	95.4	A	4.5	A	11.5	A	6.5	A	29.5	B	48.0	B
To reduce production time	96.1	A	4.7	A	8.8	A	12.9	A	32.1	B	41.5	B
To improve production flexibility	93.2	A	5.9	A	13.0	A	15.6	A	32.6	B	32.8	B
Product												
To extend product range	96.8	A	3.1	A	5.3	A	12.7	A	23.0	B	55.9	B
To improve product quality	98.9	A	1.1	A	2.7	A	8.5	A	23.0	B	64.7	B
To increase speed of delivering products to the market	97.7	A	8.7	A	7.2	A	14.2	A	20.8	B	49.1	B
To replace products being phased out	91.1	A	11.7	A	22.9	B	21.0	A	19.8	A	24.6	B
Other												
To reduce materials consumption	86.2	A	14.4	A	14.6	A	27.7	B	27.8	B	15.5	A
To reduce environmental damage	73.2	A	28.2	B	22.2	B	23.0	B	13.4	A	13.1	A
To reduce energy consumption	77.5	A	25.2	B	26.4	B	26.4	B	13.9	A	8.1	A
To deal with or to respond to new government regulations	72.7	A	40.7	B	20.0	B	19.0	B	11.5	A	8.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 10

There is one table for Question 10. It is for innovators in manufacturing.

The following contains an explanation of how to read the table 10.1 using 'Total Manufacturing Industries' as an example.

In Table 10.1, for 'Total Manufacturing Industries', 90.6% of innovative firms indicated that they faced one of the listed problems and obstacles when they innovated during the period, 1997 – 1999. Of these:

- 58.7% indicated that the high cost of development was an obstacle;
- 61.4% indicated that the inability to devote staff to projects on an on-going basis because of production requirements was an obstacle;
- 16.9% indicated that the inability to qualify for government assistance programs or research and development (R&D) tax credits was an obstacle;
- …and so on…

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Table 10.1
Problems and Obstacles That Firms Faced When They Innovated During the Period 1997-1999
Industry by Problems and Obstacles
Canada, Innovators in Manufacturing

	Percent	Reliability
Total Manufacturing Industries		
Firms that faced problems and obstacles	**90.6**	**A**
Of these, % that faced the following:		
High cost of development	58.7	A
Inability to devote staff to projects on an on-going basis because of production requirements	61.4	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	16.9	A
Lack of skilled personnel	41.3	A
Lack of financing	28.8	A
Lack of marketing capability	19.6	A
Lack of information on relevant technology	15.7	A
Lack of external technical support services	13.4	A
Lack of access to expertise in universities	5.6	A
Lack of access to expertise in government laboratories	4.7	A
Lack of cooperation with other firms	6.9	A
Lack of customer responsiveness to new products	21.2	A
Organizational rigidities in the firm	21.1	A
Government regulations	11.6	A
Other	12.4	A
Food Manufacturing		
Firms that faced problems and obstacles	**90.9**	**A**
Of these, % that faced the following:		
High cost of development	62.4	A
Inability to devote staff to projects on an on-going basis because of production requirements	51.2	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	16.3	A
Lack of skilled personnel	31.5	A
Lack of financing	30.2	A
Lack of marketing capability	22.1	A
Lack of information on relevant technology	20.1	A
Lack of external technical support services	11.9	A
Lack of access to expertise in universities	5.0	A
Lack of access to expertise in government laboratories	6.0	A
Lack of cooperation with other firms	7.0	A
Lack of customer responsiveness to new products	28.6	A
Organizational rigidities in the firm	17.4	A
Government regulations	27.6	A
Other	10.8	A
Beverage and Tobacco Product Manufacturing		
Firms that faced problems and obstacles	**91.9**	**A**
Of these, % that faced the following:		
High cost of development	66.1	A
Inability to devote staff to projects on an on-going basis because of production requirements	60.7	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	10.9	A
Lack of skilled personnel	18.5	A
Lack of financing	43.5	A
Lack of marketing capability	28.1	A
Lack of information on relevant technology	23.8	A
Lack of external technical support services	21.2	A
Lack of access to expertise in universities	0.0	A
Lack of access to expertise in government laboratories	3.1	A
Lack of cooperation with other firms	3.5	A
Lack of customer responsiveness to new products	24.8	A
Organizational rigidities in the firm	26.6	A
Government regulations	32.9	A
Other	12.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 10.1
Problems and Obstacles That Firms Faced When They Innovated During the Period 1997-1999
Industry by Problems and Obstacles
Canada, Innovators in Manufacturing

	Percent	Reliability
Total Manufacturing Industries		
Firms that faced problems and obstacles	90.6	A
Of these, % that faced the following:		
High cost of development	58.7	A
Inability to devote staff to projects on an on-going basis because of production requirements	61.4	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	16.9	A
Lack of skilled personnel	41.3	A
Lack of financing	28.8	A
Lack of marketing capability	19.6	A
Lack of information on relevant technology	15.7	A
Lack of external technical support services	13.4	A
Lack of access to expertise in universities	5.6	A
Lack of access to expertise in government laboratories	4.7	A
Lack of cooperation with other firms	6.9	A
Lack of customer responsiveness to new products	21.2	A
Organizational rigidities in the firm	21.1	A
Government regulations	11.6	A
Other	12.4	A
Food Manufacturing		
Firms that faced problems and obstacles	90.9	A
Of these, % that faced the following:		
High cost of development	62.4	A
Inability to devote staff to projects on an on-going basis because of production requirements	51.2	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	16.3	A
Lack of skilled personnel	31.5	A
Lack of financing	30.2	A
Lack of marketing capability	22.1	A
Lack of information on relevant technology	20.1	A
Lack of external technical support services	11.9	A
Lack of access to expertise in universities	5.0	A
Lack of access to expertise in government laboratories	6.0	A
Lack of cooperation with other firms	7.0	A
Lack of customer responsiveness to new products	28.6	A
Organizational rigidities in the firm	17.4	A
Government regulations	27.6	A
Other	10.8	A
Beverage and Tobacco Product Manufacturing		
Firms that faced problems and obstacles	91.9	A
Of these, % that faced the following:		
High cost of development	66.1	A
Inability to devote staff to projects on an on-going basis because of production requirements	60.7	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	10.9	A
Lack of skilled personnel	18.5	A
Lack of financing	43.5	A
Lack of marketing capability	28.1	A
Lack of information on relevant technology	23.8	A
Lack of external technical support services	21.2	A
Lack of access to expertise in universities	0.0	A
Lack of access to expertise in government laboratories	3.1	A
Lack of cooperation with other firms	3.5	A
Lack of customer responsiveness to new products	24.8	A
Organizational rigidities in the firm	26.6	A
Government regulations	32.9	A
Other	12.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 10.1
Problems and Obstacles That Firms Faced When They Innovated During the Period 1997-1999
Industry by Problems and Obstacles
Canada, Innovators in Manufacturing

	Percent	Reliability
Textile Mills		
Firms that faced problems and obstacles	94.0	A
Of these, % that faced the following:		
High cost of development	65.7	A
Inability to devote staff to projects on an on-going basis because of production requirements	55.7	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	16.3	A
Lack of skilled personnel	36.6	A
Lack of financing	28.6	A
Lack of marketing capability	24.5	A
Lack of information on relevant technology	17.6	A
Lack of external technical support services	19.3	A
Lack of access to expertise in universities	12.1	A
Lack of access to expertise in government laboratories	4.8	A
Lack of cooperation with other firms	16.3	A
Lack of customer responsiveness to new products	16.3	A
Organizational rigidities in the firm	23.3	A
Government regulations	2.4	A
Other	16.9	A
Textile Product Mills		
Firms that faced problems and obstacles	90.4	B
Of these, % that faced the following:		
High cost of development	45.9	B
Inability to devote staff to projects on an on-going basis because of production requirements	62.4	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	12.8	B
Lack of skilled personnel	24.7	B
Lack of financing	29.4	B
Lack of marketing capability	17.7	B
Lack of information on relevant technology	25.7	B
Lack of external technical support services	10.6	B
Lack of access to expertise in universities	7.6	B
Lack of access to expertise in government laboratories	5.9	A
Lack of cooperation with other firms	5.5	B
Lack of customer responsiveness to new products	24.3	B
Organizational rigidities in the firm	21.9	B
Government regulations	5.3	A
Other	17.6	B
Clothing Manufacturing		
Firms that faced problems and obstacles	89.7	A
Of these, % that faced the following:		
High cost of development	55.2	A
Inability to devote staff to projects on an on-going basis because of production requirements	50.5	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	20.3	A
Lack of skilled personnel	41.7	A
Lack of financing	30.2	A
Lack of marketing capability	29.7	A
Lack of information on relevant technology	7.8	A
Lack of external technical support services	9.9	A
Lack of access to expertise in universities	3.2	A
Lack of access to expertise in government laboratories	4.0	A
Lack of cooperation with other firms	3.9	A
Lack of customer responsiveness to new products	29.9	A
Organizational rigidities in the firm	13.8	A
Government regulations	9.5	A
Other	9.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 10.1

Problems and Obstacles That Firms Faced When They Innovated During the Period 1997-1999

Industry by Problems and Obstacles

Canada, Innovators in Manufacturing

	Percent	Reliability
Leather and Allied Product Manufacturing		
Firms that faced problems and obstacles	**86.2**	**A**
Of these, % that faced the following:		
High cost of development	72.5	B
Inability to devote staff to projects on an on-going basis because of production requirements	41.8	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	17.4	B
Lack of skilled personnel	38.3	B
Lack of financing	46.3	B
Lack of marketing capability	30.0	B
Lack of information on relevant technology	12.5	B
Lack of external technical support services	12.5	B
Lack of access to expertise in universities	2.1	A
Lack of access to expertise in government laboratories	4.2	A
Lack of cooperation with other firms	3.8	A
Lack of customer responsiveness to new products	40.4	B
Organizational rigidities in the firm	9.8	B
Government regulations	11.8	B
Other	6.3	A
Sawmills and Wood Preservation		
Firms that faced problems and obstacles	**81.8**	**A**
Of these, % that faced the following:		
High cost of development	60.4	A
Inability to devote staff to projects on an on-going basis because of production requirements	40.3	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	14.2	A
Lack of skilled personnel	32.7	A
Lack of financing	25.6	A
Lack of marketing capability	18.5	A
Lack of information on relevant technology	13.1	A
Lack of external technical support services	12.1	A
Lack of access to expertise in universities	3.0	A
Lack of access to expertise in government laboratories	1.6	A
Lack of cooperation with other firms	5.4	A
Lack of customer responsiveness to new products	12.3	A
Organizational rigidities in the firm	10.8	A
Government regulations	23.6	A
Other	20.2	A
Veneer, Plywood and Engineered Wood Product Manufacturing		
Firms that faced problems and obstacles	**85.5**	**A**
Of these, % that faced the following:		
High cost of development	73.7	B
Inability to devote staff to projects on an on-going basis because of production requirements	69.8	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	14.2	A
Lack of skilled personnel	26.2	B
Lack of financing	17.9	B
Lack of marketing capability	33.0	B
Lack of information on relevant technology	18.0	B
Lack of external technical support services	16.5	A
Lack of access to expertise in universities	3.6	A
Lack of access to expertise in government laboratories	1.7	A
Lack of cooperation with other firms	8.7	A
Lack of customer responsiveness to new products	23.2	B
Organizational rigidities in the firm	19.9	B
Government regulations	12.1	A
Other	14.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 10.1
Problems and Obstacles That Firms Faced When They Innovated During the Period 1997-1999
Industry by Problems and Obstacles
Canada, Innovators in Manufacturing

	Percent	Reliability
Other Wood Product Manufacturing		
Firms that faced problems and obstacles	**84.7**	**A**
Of these, % that faced the following:		
High cost of development	49.4	B
Inability to devote staff to projects on an on-going basis because of production requirements	46.2	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	22.8	A
Lack of skilled personnel	36.3	B
Lack of financing	22.9	A
Lack of marketing capability	15.1	A
Lack of information on relevant technology	13.6	A
Lack of external technical support services	15.4	A
Lack of access to expertise in universities	6.1	A
Lack of access to expertise in government laboratories	3.9	A
Lack of cooperation with other firms	7.2	A
Lack of customer responsiveness to new products	19.3	A
Organizational rigidities in the firm	12.8	A
Government regulations	16.1	A
Other	29.1	A
Paper Manufacturing		
Firms that faced problems and obstacles	**86.3**	**A**
Of these, % that faced the following:		
High cost of development	61.8	A
Inability to devote staff to projects on an on-going basis because of production requirements	55.7	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	11.4	A
Lack of skilled personnel	19.1	A
Lack of financing	26.4	A
Lack of marketing capability	17.5	A
Lack of information on relevant technology	14.3	A
Lack of external technical support services	11.6	A
Lack of access to expertise in universities	2.4	A
Lack of access to expertise in government laboratories	2.9	A
Lack of cooperation with other firms	5.6	A
Lack of customer responsiveness to new products	24.5	A
Organizational rigidities in the firm	26.0	A
Government regulations	5.2	A
Other	12.4	A
Printing and Related Support Activities		
Firms that faced problems and obstacles	**90.6**	**A**
Of these, % that faced the following:		
High cost of development	50.3	B
Inability to devote staff to projects on an on-going basis because of production requirements	61.0	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	12.0	A
Lack of skilled personnel	41.5	B
Lack of financing	28.6	B
Lack of marketing capability	25.4	A
Lack of information on relevant technology	14.0	A
Lack of external technical support services	13.2	A
Lack of access to expertise in universities	2.7	A
Lack of access to expertise in government laboratories	1.0	A
Lack of cooperation with other firms	5.7	A
Lack of customer responsiveness to new products	29.2	B
Organizational rigidities in the firm	20.3	A
Government regulations	3.0	A
Other	7.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 10.1
Problems and Obstacles That Firms Faced When They Innovated During the Period 1997-1999
Industry by Problems and Obstacles
Canada, Innovators in Manufacturing

	Percent	Reliability
Petroleum and Coal Products Manufacturing		
Firms that faced problems and obstacles	**87.8**	**A**
Of these, % that faced the following:		
High cost of development	47.2	A
Inability to devote staff to projects on an on-going basis because of production requirements	58.3	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	2.8	A
Lack of skilled personnel	27.8	A
Lack of financing	19.4	A
Lack of marketing capability	11.1	A
Lack of information on relevant technology	19.4	A
Lack of external technical support services	11.1	A
Lack of access to expertise in universities	0.0	A
Lack of access to expertise in government laboratories	2.8	A
Lack of cooperation with other firms	0.0	A
Lack of customer responsiveness to new products	19.4	A
Organizational rigidities in the firm	16.7	A
Government regulations	13.9	A
Other	11.1	A
Chemical Manufacturing (excluding 3254)		
Firms that faced problems and obstacles	**90.5**	**A**
Of these, % that faced the following:		
High cost of development	58.3	A
Inability to devote staff to projects on an on-going basis because of production requirements	52.0	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	11.4	A
Lack of skilled personnel	29.2	A
Lack of financing	29.3	A
Lack of marketing capability	17.0	A
Lack of information on relevant technology	15.5	A
Lack of external technical support services	12.2	A
Lack of access to expertise in universities	4.2	A
Lack of access to expertise in government laboratories	5.5	A
Lack of cooperation with other firms	6.3	A
Lack of customer responsiveness to new products	23.8	A
Organizational rigidities in the firm	22.5	A
Government regulations	22.7	A
Other	12.3	A
Pharmaceutical and Medicine Manufacturing (3254)		
Firms that faced problems and obstacles	**94.2**	**A**
Of these, % that faced the following:		
High cost of development	59.4	B
Inability to devote staff to projects on an on-going basis because of production requirements	47.7	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	8.9	A
Lack of skilled personnel	30.1	A
Lack of financing	27.8	B
Lack of marketing capability	21.1	B
Lack of information on relevant technology	8.2	A
Lack of external technical support services	13.5	A
Lack of access to expertise in universities	2.0	A
Lack of access to expertise in government laboratories	4.0	A
Lack of cooperation with other firms	8.2	A
Lack of customer responsiveness to new products	26.6	A
Organizational rigidities in the firm	25.6	A
Government regulations	66.3	B
Other	10.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 10.1

Problems and Obstacles That Firms Faced When They Innovated During the Period 1997-1999

Industry by Problems and Obstacles

Canada, Innovators in Manufacturing

	Percent	Reliability
Plastics and Rubber Products Manufacturing		
Firms that faced problems and obstacles	89.9	A
Of these, % that faced the following:		
High cost of development	57.8	A
Inability to devote staff to projects on an on-going basis because of production requirements	68.9	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	15.2	A
Lack of skilled personnel	46.4	A
Lack of financing	25.5	A
Lack of marketing capability	17.2	A
Lack of information on relevant technology	20.7	A
Lack of external technical support services	16.8	A
Lack of access to expertise in universities	7.8	A
Lack of access to expertise in government laboratories	5.0	A
Lack of cooperation with other firms	7.0	A
Lack of customer responsiveness to new products	22.8	A
Organizational rigidities in the firm	19.9	A
Government regulations	9.4	A
Other	12.0	A
Non-Metallic Mineral Products Manufacturing		
Firms that faced problems and obstacles	87.0	A
Of these, % that faced the following:		
High cost of development	59.1	A
Inability to devote staff to projects on an on-going basis because of production requirements	57.2	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	18.8	A
Lack of skilled personnel	28.6	A
Lack of financing	23.3	A
Lack of marketing capability	15.2	A
Lack of information on relevant technology	15.1	A
Lack of external technical support services	12.9	A
Lack of access to expertise in universities	3.8	A
Lack of access to expertise in government laboratories	0.9	A
Lack of cooperation with other firms	4.0	A
Lack of customer responsiveness to new products	23.3	A
Organizational rigidities in the firm	15.5	A
Government regulations	16.5	A
Other	9.3	A
Primary Metal Manufacturing		
Firms that faced problems and obstacles	91.6	A
Of these, % that faced the following:		
High cost of development	59.5	A
Inability to devote staff to projects on an on-going basis because of production requirements	63.6	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	13.7	A
Lack of skilled personnel	45.1	A
Lack of financing	27.4	A
Lack of marketing capability	14.3	A
Lack of information on relevant technology	24.0	A
Lack of external technical support services	16.3	A
Lack of access to expertise in universities	9.0	A
Lack of access to expertise in government laboratories	4.6	A
Lack of cooperation with other firms	4.8	A
Lack of customer responsiveness to new products	12.0	A
Organizational rigidities in the firm	14.2	A
Government regulations	4.5	A
Other	12.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 10.1
Problems and Obstacles That Firms Faced When They Innovated During the Period 1997-1999
Industry by Problems and Obstacles
Canada, Innovators in Manufacturing

	Percent	Reliability
Fabricated Metal Product Manufacturing		
Firms that faced problems and obstacles	**92.7**	**A**
Of these, % that faced the following:		
High cost of development	57.5	A
Inability to devote staff to projects on an on-going basis because of production requirements	71.8	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	20.7	A
Lack of skilled personnel	49.0	A
Lack of financing	29.9	A
Lack of marketing capability	18.4	A
Lack of information on relevant technology	16.9	A
Lack of external technical support services	14.2	A
Lack of access to expertise in universities	6.7	A
Lack of access to expertise in government laboratories	5.1	A
Lack of cooperation with other firms	8.5	A
Lack of customer responsiveness to new products	18.7	A
Organizational rigidities in the firm	22.7	A
Government regulations	10.2	A
Other	13.9	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)		
Firms that faced problems and obstacles	**95.5**	**A**
Of these, % that faced the following:		
High cost of development	59.3	A
Inability to devote staff to projects on an on-going basis because of production requirements	69.7	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	24.6	A
Lack of skilled personnel	52.0	A
Lack of financing	39.3	A
Lack of marketing capability	17.5	A
Lack of information on relevant technology	8.7	A
Lack of external technical support services	7.8	A
Lack of access to expertise in universities	4.5	A
Lack of access to expertise in government laboratories	2.4	A
Lack of cooperation with other firms	8.0	A
Lack of customer responsiveness to new products	17.8	A
Organizational rigidities in the firm	17.1	A
Government regulations	9.3	A
Other	11.8	A
Machinery Manufacturing (excluding 3331 & 3332)		
Firms that faced problems and obstacles	**92.6**	**A**
Of these, % that faced the following:		
High cost of development	59.0	B
Inability to devote staff to projects on an on-going basis because of production requirements	68.3	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	17.0	A
Lack of skilled personnel	54.2	B
Lack of financing	27.9	A
Lack of marketing capability	18.8	A
Lack of information on relevant technology	11.6	A
Lack of external technical support services	11.1	A
Lack of access to expertise in universities	7.4	A
Lack of access to expertise in government laboratories	4.2	A
Lack of cooperation with other firms	6.9	A
Lack of customer responsiveness to new products	20.5	A
Organizational rigidities in the firm	26.8	A
Government regulations	5.8	A
Other	13.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 10.1

Problems and Obstacles That Firms Faced When They Innovated During the Period 1997-1999

Industry by Problems and Obstacles

Canada, Innovators in Manufacturing

	Percent	Reliability
Computer and Peripheral Equipment Manufacturing		
Firms that faced problems and obstacles	**100.0**	**A**
Of these, % that faced the following:		
High cost of development	66.9	B
Inability to devote staff to projects on an on-going basis because of production requirements	43.4	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	12.0	A
Lack of skilled personnel	26.7	B
Lack of financing	28.5	B
Lack of marketing capability	22.9	B
Lack of information on relevant technology	14.3	A
Lack of external technical support services	20.2	B
Lack of access to expertise in universities	12.4	B
Lack of access to expertise in government laboratories	2.3	A
Lack of cooperation with other firms	9.3	A
Lack of customer responsiveness to new products	17.1	B
Organizational rigidities in the firm	28.3	B
Government regulations	7.0	A
Other	9.7	A
Communications Equipment Manufacturing		
Firms that faced problems and obstacles	**100.0**	**A**
Of these, % that faced the following:		
High cost of development	71.0	B
Inability to devote staff to projects on an on-going basis because of production requirements	69.2	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	8.9	A
Lack of skilled personnel	49.2	B
Lack of financing	23.0	B
Lack of marketing capability	45.9	B
Lack of information on relevant technology	12.8	A
Lack of external technical support services	7.6	A
Lack of access to expertise in universities	5.0	A
Lack of access to expertise in government laboratories	3.3	A
Lack of cooperation with other firms	8.4	A
Lack of customer responsiveness to new products	33.1	B
Organizational rigidities in the firm	24.7	A
Government regulations	5.9	A
Other	5.2	A
Audio and Video Equipment Manufacturing		
Firms that faced problems and obstacles	**x**	**A**
Of these, % that faced the following:		
High cost of development	x	A
Inability to devote staff to projects on an on-going basis because of production requirements	x	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	x	A
Lack of skilled personnel	x	A
Lack of financing	x	A
Lack of marketing capability	x	A
Lack of information on relevant technology	x	A
Lack of external technical support services	x	A
Lack of access to expertise in universities	x	A
Lack of access to expertise in government laboratories	x	A
Lack of cooperation with other firms	x	A
Lack of customer responsiveness to new products	x	A
Organizational rigidities in the firm	x	A
Government regulations	x	A
Other	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 10.1
Problems and Obstacles That Firms Faced When They Innovated During the Period 1997-1999
Industry by Problems and Obstacles
Canada, Innovators in Manufacturing

	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing		
Firms that faced problems and obstacles	**89.1**	**A**
Of these, % that faced the following:		
High cost of development	63.3	B
Inability to devote staff to projects on an on-going basis because of production requirements	80.2	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	12.5	A
Lack of skilled personnel	59.1	B
Lack of financing	26.1	B
Lack of marketing capability	19.6	A
Lack of information on relevant technology	7.4	A
Lack of external technical support services	7.5	A
Lack of access to expertise in universities	14.9	A
Lack of access to expertise in government laboratories	4.8	A
Lack of cooperation with other firms	0.0	A
Lack of customer responsiveness to new products	7.5	A
Organizational rigidities in the firm	25.6	B
Government regulations	0.0	A
Other	10.3	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media		
Firms that faced problems and obstacles	**93.4**	**A**
Of these, % that faced the following:		
High cost of development	63.9	B
Inability to devote staff to projects on an on-going basis because of production requirements	56.1	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	17.1	A
Lack of skilled personnel	48.7	B
Lack of financing	38.3	B
Lack of marketing capability	25.1	A
Lack of information on relevant technology	16.4	A
Lack of external technical support services	12.8	A
Lack of access to expertise in universities	9.3	A
Lack of access to expertise in government laboratories	9.4	A
Lack of cooperation with other firms	5.0	A
Lack of customer responsiveness to new products	19.0	A
Organizational rigidities in the firm	21.6	A
Government regulations	11.3	A
Other	13.6	A
Electrical Equipment, Appliance and Component Manufacturing		
Firms that faced problems and obstacles	**95.0**	**A**
Of these, % that faced the following:		
High cost of development	62.1	A
Inability to devote staff to projects on an on-going basis because of production requirements	65.0	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	16.8	A
Lack of skilled personnel	43.5	A
Lack of financing	32.6	A
Lack of marketing capability	17.4	A
Lack of information on relevant technology	15.6	A
Lack of external technical support services	19.7	A
Lack of access to expertise in universities	13.0	A
Lack of access to expertise in government laboratories	13.0	A
Lack of cooperation with other firms	4.2	A
Lack of customer responsiveness to new products	21.3	A
Organizational rigidities in the firm	26.5	A
Government regulations	3.2	A
Other	12.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 10.1
Problems and Obstacles That Firms Faced When They Innovated During the Period 1997-1999
Industry by Problems and Obstacles
Canada, Innovators in Manufacturing

	Percent	Reliability
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing		
Firms that faced problems and obstacles	93.9	A
Of these, % that faced the following:		
High cost of development	55.6	B
Inability to devote staff to projects on an on-going basis because of production requirements	67.3	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	13.1	A
Lack of skilled personnel	49.0	B
Lack of financing	29.0	A
Lack of marketing capability	11.8	A
Lack of information on relevant technology	13.4	A
Lack of external technical support services	11.6	A
Lack of access to expertise in universities	3.4	A
Lack of access to expertise in government laboratories	4.7	A
Lack of cooperation with other firms	6.0	A
Lack of customer responsiveness to new products	19.4	A
Organizational rigidities in the firm	24.4	A
Government regulations	7.9	A
Other	10.2	A
Aerospace Product and Parts Manufacturing		
Firms that faced problems and obstacles	90.0	B
Of these, % that faced the following:		
High cost of development	78.6	B
Inability to devote staff to projects on an on-going basis because of production requirements	63.1	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	34.6	B
Lack of skilled personnel	40.7	B
Lack of financing	38.6	B
Lack of marketing capability	6.5	A
Lack of information on relevant technology	13.2	A
Lack of external technical support services	10.4	A
Lack of access to expertise in universities	8.3	A
Lack of access to expertise in government laboratories	11.9	A
Lack of cooperation with other firms	13.3	A
Lack of customer responsiveness to new products	9.9	A
Organizational rigidities in the firm	30.2	B
Government regulations	11.5	A
Other	14.2	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment		
Firms that faced problems and obstacles	90.4	A
Of these, % that faced the following:		
High cost of development	51.6	B
Inability to devote staff to projects on an on-going basis because of production requirements	65.6	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	22.5	B
Lack of skilled personnel	33.7	B
Lack of financing	37.3	B
Lack of marketing capability	8.1	A
Lack of information on relevant technology	8.3	A
Lack of external technical support services	3.8	A
Lack of access to expertise in universities	1.9	B
Lack of access to expertise in government laboratories	0.0	A
Lack of cooperation with other firms	0.0	A
Lack of customer responsiveness to new products	9.3	B
Organizational rigidities in the firm	18.9	B
Government regulations	16.8	B
Other	14.7	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 10.1
Problems and Obstacles That Firms Faced When They Innovated During the Period 1997-1999
Industry by Problems and Obstacles
Canada, Innovators in Manufacturing

	Percent	Reliability
Furniture and Related Products Manufacturing		
Firms that faced problems and obstacles	**86.8**	**A**
Of these, % that faced the following:		
High cost of development	49.9	B
Inability to devote staff to projects on an on-going basis because of production requirements	62.4	A
Inability to qualify for government assistance programs or research and development (R&D) tax credits	19.9	A
Lack of skilled personnel	45.0	B
Lack of financing	19.4	A
Lack of marketing capability	17.8	A
Lack of information on relevant technology	15.3	A
Lack of external technical support services	12.5	A
Lack of access to expertise in universities	1.4	A
Lack of access to expertise in government laboratories	3.1	A
Lack of cooperation with other firms	6.2	A
Lack of customer responsiveness to new products	12.6	A
Organizational rigidities in the firm	26.4	A
Government regulations	4.1	A
Other	8.5	A
Miscellaneous Manufacturing		
Firms that faced problems and obstacles	**89.9**	**A**
Of these, % that faced the following:		
High cost of development	71.7	B
Inability to devote staff to projects on an on-going basis because of production requirements	73.0	B
Inability to qualify for government assistance programs or research and development (R&D) tax credits	20.8	A
Lack of skilled personnel	52.9	B
Lack of financing	32.2	B
Lack of marketing capability	16.0	A
Lack of information on relevant technology	20.5	B
Lack of external technical support services	18.9	A
Lack of access to expertise in universities	7.7	A
Lack of access to expertise in government laboratories	10.0	A
Lack of cooperation with other firms	12.6	A
Lack of customer responsiveness to new products	10.5	A
Organizational rigidities in the firm	26.4	B
Government regulations	6.1	A
Other	12.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

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Interpretative Notes
Question 11

There are no tabulations for this question. It was a written response and will be analysed later.

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Interpretative Notes
Tables for Question 12

There are three tables for Question 12. All three tables are for innovators in manufacturing.

The following contains an explanation of how to read Table 12.1 using 'Total Manufacturing Industries' as an example.

In Table 12.1 for 'Total Manufacturing Industries', 84.7% of innovative firms are product innovators. Of these:

- 93.9% had sales from new products; and
- 90.6% had sales from significantly improved products.

The following contains an explanation of how to read Tables 12.2 and 12.3 using 12.2 as an example.

In Table 12.2 for 'Total Manufacturing Industries', 84.7% of innovative firms are product innovators. Of these, 93.9% had sales from new products and of these:

- 30.9% indicated 1% to 5% of sales from new products;
- 34.4% indicated 6% to 15% of sales from new products;
- 19.7% indicated 16% to 25% of sales from new products;
- 10.2% indicated 26% to 50% of sales from new products;
- 3.1% indicated 51% to 75% of sales from new products; and
- 1.5% indicated 76% to 100% of sales from new products.

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Table 12.1

Impact on Sales in 1999 of New or Significantly Improved Products (Goods or Services) Introduced During the Period 1997-1999

Canada, Innovators in Manufacturing

	Product Innovators		Of These, % Having Sales Of: New Products		Significantly Improved Products	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	84.7	A	93.9	A	90.6	A
Food Manufacturing	91.3	A	96.0	A	91.1	A
Beverage and Tobacco Product Manufacturing	82.2	A	100.0	A	84.1	A
Textile Mills	88.7	A	94.1	A	91.6	A
Textile Product Mills	99.1	A	98.1	A	90.0	A
Clothing Manufacturing	78.4	A	89.2	A	87.7	A
Leather and Allied Product Manufacturing	100.0	A	96.7	A	86.5	B
Sawmills and Wood Preservation	69.8	A	97.7	A	76.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing	72.3	B	89.3	A	83.4	B
Other Wood Product Manufacturing	78.5	A	88.1	A	82.3	A
Paper Manufacturing	77.0	A	92.3	A	94.2	A
Printing and Related Support Activities	76.4	A	90.7	A	90.5	A
Petroleum and Coal Products Manufacturing	85.4	A	82.9	A	85.7	A
Chemical Manufacturing (excluding 3254)	89.4	A	95.4	A	94.2	A
Pharmaceutical and Medicine Manufacturing (3254)	90.2	A	97.1	A	82.7	A
Plastics and Rubber Products Manufacturing	90.8	A	97.5	A	90.4	A
Non-Metallic Mineral Products Manufacturing	85.9	A	94.8	A	92.0	A
Primary Metal Manufacturing	76.7	A	93.5	A	85.3	A
Fabricated Metal Product Manufacturing	77.9	A	92.3	A	93.5	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	91.1	A	95.8	A	97.8	A
Machinery Manufacturing (excluding 3331 & 3332)	85.6	A	95.4	A	93.6	A
Computer and Peripheral Equipment Manufacturing	100.0	A	97.7	A	88.4	A
Communications Equipment Manufacturing	93.4	A	93.8	A	86.8	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	85.6	A	100.0	A	97.5	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	93.5	A	94.6	A	93.7	A
Electrical Equipment, Appliance and Component Manufacturing	94.1	A	93.1	A	91.8	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	88.0	A	89.5	A	92.4	A
Aerospace Product and Parts Manufacturing	81.2	B	93.6	A	94.6	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	90.8	B	95.5	A	73.8	B
Furniture and Related Products Manufacturing	81.3	A	90.4	A	91.2	A
Miscellaneous Manufacturing	94.0	A	97.6	A	86.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 12.2

Impact on Sales in 1999 of New Products (Goods or Services) Introduced During the Period 1997-1999

Canada, Innovators in Manufacturing

			Percentage of Sales From New Products											
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries														
Product Innovators	84.7	A												
Of These, % Having Sales From New Products	93.9	A	30.9	A	34.4	A	19.7	A	10.2	A	3.1	A	1.5	A
Food Manufacturing														
Product Innovators	91.3	A												
Of These, % Having Sales From New Products	96.0	A	34.4	A	39.7	A	14.2	A	8.0	A	2.6	A	1.2	A
Beverage and Tobacco Product Manufacturing														
Product Innovators	82.2	A												
Of These, % Having Sales From New Products	100.0	A	45.3	B	30.7	A	8.1	A	14.1	A	1.8	A	0.0	A
Textile Mills														
Product Innovators	88.7	A												
Of These, % Having Sales From New Products	94.1	A	23.9	A	32.1	A	24.3	A	17.9	A	1.7	A	0.0	A
Textile Product Mills														
Product Innovators	99.1	A												
Of These, % Having Sales From New Products	98.1	A	30.3	B	35.3	B	16.7	A	10.9	B	5.8	A	1.0	A
Clothing Manufacturing														
Product Innovators	78.4	A												
Of These, % Having Sales From New Products	89.2	A	29.8	A	28.3	A	12.2	A	19.7	A	8.3	A	1.7	A
Leather and Allied Product Manufacturing														
Product Innovators	100.0	A												
Of These, % Having Sales From New Products	96.7	A	8.4	A	46.9	B	30.1	B	7.5	A	5.3	A	1.9	A
Sawmills and Wood Preservation														
Product Innovators	69.8	A												
Of These, % Having Sales From New Products	97.7	A	44.3	A	25.3	A	16.7	A	7.3	A	0.0	A	6.3	A
Veneer, Plywood and Engineered Wood Product Manufacturing														
Product Innovators	72.3	B												
Of These, % Having Sales From New Products	89.3	A	36.4	B	45.2	B	4.5	A	11.8	A	0.0	A	2.1	A
Other Wood Product Manufacturing														
Product Innovators	78.5	A												
Of These, % Having Sales From New Products	88.1	A	26.7	B	42.2	B	18.2	A	9.5	A	1.7	A	1.7	A
Paper Manufacturing														
Product Innovators	77.0	A												
Of These, % Having Sales From New Products	92.3	A	38.0	A	36.3	A	19.3	A	5.2	A	1.3	A	0.0	A
Printing and Related Support Activities														
Product Innovators	76.4	A												
Of These, % Having Sales From New Products	90.7	A	28.5	B	38.3	B	22.6	B	8.2	A	1.1	A	1.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 12.2

Impact on Sales in 1999 of New Products (Goods or Services) Introduced During the Period 1997-1999

Canada, Innovators in Manufacturing

			Percentage of Sales From New Products											
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing														
Product Innovators	85.4	A												
Of These, % Having Sales From New Products	82.9	A	31.0	A	51.7	A	17.2	A	0.0	A	0.0	A	0.0	A
Chemical Manufacturing (excluding 3254)														
Product Innovators	89.4	A												
Of These, % Having Sales From New Products	95.4	A	40.5	A	37.2	A	14.5	A	6.1	A	1.3	A	0.3	A
Pharmaceutical and Medicine Manufacturing (3254)														
Product Innovators	90.2	A												
Of These, % Having Sales From New Products	97.1	A	15.1	A	43.7	B	24.6	A	8.8	A	7.8	A	0.0	A
Plastics and Rubber Products Manufacturing														
Product Innovators	90.8	A												
Of These, % Having Sales From New Products	97.5	A	32.2	A	37.4	A	18.5	A	8.1	A	2.4	A	1.4	A
Non-Metallic Mineral Products Manufacturing														
Product Innovators	85.9	A												
Of These, % Having Sales From New Products	94.8	A	37.1	A	34.6	A	22.6	A	2.8	A	2.2	A	0.6	A
Primary Metal Manufacturing														
Product Innovators	76.7	A												
Of These, % Having Sales From New Products	93.5	A	36.9	A	32.1	A	16.5	A	9.0	A	3.4	A	2.2	A
Fabricated Metal Product Manufacturing														
Product Innovators	77.9	A												
Of These, % Having Sales From New Products	92.3	A	39.8	B	30.8	A	19.6	A	7.2	A	1.5	A	1.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)														
Product Innovators	91.1	A												
Of These, % Having Sales From New Products	95.8	A	28.9	A	30.8	A	28.6	A	8.1	A	3.6	A	0.0	A
Machinery Manufacturing (excluding 3331 & 3332)														
Product Innovators	85.6	A												
Of These, % Having Sales From New Products	95.4	A	23.6	A	35.9	B	21.7	A	14.8	A	2.7	A	0.3	A
Computer and Peripheral Equipment Manufacturing														
Product Innovators	100.0	A												
Of These, % Having Sales From New Products	97.7	A	8.3	A	21.0	B	32.1	B	19.0	A	7.1	A	12.3	A
Communications Equipment Manufacturing														
Product Innovators	93.4	A												
Of These, % Having Sales From New Products	93.8	A	13.8	A	18.1	B	28.2	B	10.5	A	29.5	B	0.0	A
Audio and Video Equipment Manufacturing														
Product Innovators	x	A												
Of These, % Having Sales From New Products	x	A	x	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 12.2

Impact on Sales in 1999 of New Products (Goods or Services) Introduced During the Period 1997-1999

Canada, Innovators in Manufacturing

			Percentage of Sales From New Products											
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing														
Product Innovators	85.6	A												
Of These, % Having Sales From New Products	100.0	A	12.7	A	17.9	B	40.8	B	15.5	A	10.4	A	2.7	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media														
Product Innovators	93.5	A												
Of These, % Having Sales From New Products	94.6	A	27.2	B	39.5	B	17.0	A	12.8	A	1.0	A	2.5	A
Electrical Equipment, Appliance and Component Manufacturing														
Product Innovators	94.1	A												
Of These, % Having Sales From New Products	93.1	A	27.2	A	26.5	A	26.4	A	12.7	A	6.0	A	1.2	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing														
Product Innovators	88.0	A												
Of These, % Having Sales From New Products	89.5	A	24.4	B	34.4	B	22.5	B	12.9	A	3.3	A	2.4	A
Aerospace Product and Parts Manufacturing														
Product Innovators	81.2	B												
Of These, % Having Sales From New Products	93.6	A	9.6	A	34.8	B	36.8	B	11.8	A	0.0	A	7.0	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment														
Product Innovators	90.8	B												
Of These, % Having Sales From New Products	95.5	A	8.8	A	34.5	B	24.5	B	14.2	B	16.0	B	2.0	A
Furniture and Related Products Manufacturing														
Product Innovators	81.3	A												
Of These, % Having Sales From New Products	90.4	A	23.2	A	32.2	B	25.6	A	14.1	A	1.2	A	3.6	A
Miscellaneous Manufacturing														
Product Innovators	94.0	A												
Of These, % Having Sales From New Products	97.6	A	30.8	B	31.3	B	16.4	A	13.8	A	5.0	A	2.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 12.3

Impact on Sales in 1999 of Significantly Improved Products (Goods or Services) Introduced During the Period 1997-1999

Canada, Innovators in Manufacturing

			Percentage of Sales From Significantly Improved Products											
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries														
Product Innovators	84.7	A												
Of These, % Having Sales From Significantly Improved Products	90.6	A	29.0	A	34.4	A	20.8	A	10.6	A	3.6	A	1.6	A
Food Manufacturing														
Product Innovators	91.3	A												
Of These, % Having Sales From Significantly Improved Products	91.1	A	39.2	A	35.8	A	14.8	A	7.8	A	1.3	A	1.1	A
Beverage and Tobacco Product Manufacturing														
Product Innovators	82.2	A												
Of These, % Having Sales From Significantly Improved Products	84.1	A	42.9	B	40.6	B	4.3	A	10.0	A	2.2	A	0.0	A
Textile Mills														
Product Innovators	88.7	A												
Of These, % Having Sales From Significantly Improved Products	91.6	A	24.9	A	34.1	A	24.9	A	13.4	A	2.7	A	0.0	A
Textile Product Mills														
Product Innovators	99.1	A												
Of These, % Having Sales From Significantly Improved Products	90.0	A	29.4	B	30.0	B	32.1	B	6.5	A	1.0	A	1.0	A
Clothing Manufacturing														
Product Innovators	78.4	A												
Of These, % Having Sales From Significantly Improved Products	87.7	A	24.7	A	27.0	A	16.2	A	20.4	A	9.4	A	2.2	A
Leather and Allied Product Manufacturing														
Product Innovators	100.0	A												
Of These, % Having Sales From Significantly Improved Products	86.5	B	25.7	B	36.1	B	18.1	B	18.1	B	2.1	A	0.0	A
Sawmills and Wood Preservation														
Product Innovators	69.8	A												
Of These, % Having Sales From Significantly Improved Products	76.9	A	40.5	B	27.0	A	14.4	A	11.1	A	2.1	A	4.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing														
Product Innovators	72.3	B												
Of These, % Having Sales From Significantly Improved Products	83.4	B	36.3	B	40.0	B	10.7	A	8.4	A	0.0	A	4.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 12.3

Impact on Sales in 1999 of Significantly Improved Products (Goods or Services) Introduced During the Period 1997-1999

Canada, Innovators in Manufacturing

			Percentage of Sales From Significantly Improved Products											
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Other Wood Product Manufacturing														
Product Innovators	78.5	A												
Of These, % Having Sales From Significantly Improved Products	82.3	A	25.1	B	38.7	B	20.6	B	6.4	A	6.6	A	2.6	A
Paper Manufacturing														
Product Innovators	77.0	A												
Of These, % Having Sales From Significantly Improved Products	94.2	A	29.4	A	30.4	A	21.5	A	9.2	A	7.3	A	2.2	A
Printing and Related Support Activities														
Product Innovators	76.4	A												
Of These, % Having Sales From Significantly Improved Products	90.5	A	30.4	B	33.0	B	21.5	B	8.3	A	4.1	A	2.7	A
Petroleum and Coal Products Manufacturing														
Product Innovators	85.4	A												
Of These, % Having Sales From Significantly Improved Products	85.7	A	36.7	A	36.7	A	13.3	A	13.3	A	0.0	A	0.0	A
Chemical Manufacturing (excluding 3254)														
Product Innovators	89.4	A												
Of These, % Having Sales From Significantly Improved Products	94.2	A	35.5	A	35.3	A	18.3	A	10.3	A	0.3	A	0.3	A
Pharmaceutical and Medicine Manufacturing (3254)														
Product Innovators	90.2	A												
Of These, % Having Sales From Significantly Improved Products	82.7	A	60.0	B	25.1	B	9.5	A	2.8	A	2.5	A	0.0	A
Plastics and Rubber Products Manufacturing														
Product Innovators	90.8	A												
Of These, % Having Sales From Significantly Improved Products	90.4	A	30.1	A	34.2	A	25.0	A	7.9	A	2.1	A	0.8	A
Non-Metallic Mineral Products Manufacturing														
Product Innovators	85.9	A												
Of These, % Having Sales From Significantly Improved Products	92.0	A	34.8	A	28.4	A	21.9	A	10.5	A	3.4	A	1.2	A
Primary Metal Manufacturing														
Product Innovators	76.7	A												
Of These, % Having Sales From Significantly Improved Products	85.3	A	29.5	A	41.8	A	17.3	A	4.2	A	4.7	A	2.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 12.3

Impact on Sales in 1999 of Significantly Improved Products (Goods or Services) Introduced During the Period 1997-1999

Canada, Innovators in Manufacturing

			Percentage of Sales From Significantly Improved Products											
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing														
Product Innovators	**77.9**	**A**												
Of These, % Having Sales From Significantly Improved Products	93.5	A	32.0	A	39.5	B	18.5	A	5.4	A	3.4	A	1.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)														
Product Innovators	**91.1**	**A**												
Of These, % Having Sales From Significantly Improved Products	97.8	A	20.8	A	33.6	A	24.7	A	14.4	A	4.8	A	1.8	A
Machinery Manufacturing (excluding 3331 & 3332)														
Product Innovators	**85.6**	**A**												
Of These, % Having Sales From Significantly Improved Products	93.6	A	21.2	A	40.1	B	19.6	A	15.9	A	2.3	A	0.8	A
Computer and Peripheral Equipment Manufacturing														
Product Innovators	**100.0**	**A**												
Of These, % Having Sales From Significantly Improved Products	88.4	A	9.2	A	18.0	B	31.4	B	16.2	A	16.9	B	8.3	A
Communications Equipment Manufacturing														
Product Innovators	**93.4**	**A**												
Of These, % Having Sales From Significantly Improved Products	86.8	B	4.1	A	27.0	B	34.8	B	20.4	B	4.4	A	9.4	A
Audio and Video Equipment Manufacturing														
Product Innovators	**x**	**A**												
Of These, % Having Sales From Significantly Improved Products	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing														
Product Innovators	**85.6**	**A**												
Of These, % Having Sales From Significantly Improved Products	97.5	A	15.8	A	39.6	B	18.5	B	20.9	B	5.2	A	0.0	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media														
Product Innovators	**93.5**	**A**												
Of These, % Having Sales From Significantly Improved Products	93.7	A	23.7	B	29.7	B	28.8	B	15.4	A	2.3	A	0.0	A
Electrical Equipment, Appliance and Component Manufacturing														
Product Innovators	**94.1**	**A**												
Of These, % Having Sales From Significantly Improved Products	91.8	A	17.2	A	34.7	A	27.8	A	13.1	A	6.0	A	1.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 12.3

Impact on Sales in 1999 of Significantly Improved Products (Goods or Services) Introduced During the Period 1997-1999

Canada, Innovators in Manufacturing

			Percentage of Sales From Significantly Improved Products											
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing														
Product Innovators	88.0	A												
Of These, % Having Sales From Significantly Improved Products	92.4	A	26.8	B	33.3	B	23.0	B	9.5	A	3.5	A	3.9	A
Aerospace Product and Parts Manufacturing														
Product Innovators	81.2	B												
Of These, % Having Sales From Significantly Improved Products	94.6	A	26.5	B	33.2	B	17.8	B	11.9	A	8.3	A	2.2	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment														
Product Innovators	90.8	B												
Of These, % Having Sales From Significantly Improved Products	73.8	B	3.5	A	30.9	B	37.4	B	17.5	B	8.2	B	2.6	A
Furniture and Related Products Manufacturing														
Product Innovators	81.3	A												
Of These, % Having Sales From Significantly Improved Products	91.2	A	26.3	A	32.0	B	28.5	A	10.2	A	1.4	A	1.6	A
Miscellaneous Manufacturing														
Product Innovators	94.0	A												
Of These, % Having Sales From Significantly Improved Products	86.7	A	26.0	A	33.4	B	18.5	A	14.6	B	6.7	A	0.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 13

There are two tables for Question 13. Both tables are for innovators in manufacturing. The tables are sorted differently. Table 13.1 shows the impact of innovation by industry, whereas Table 1.2 shows industry by impact of innovation.

The following contains an explanation of how to read the tables for Question 13 using Table 13.1, 'Total Manufacturing Industries', as an example.

Innovators in manufacturing were asked their opinions on several statements on the impact of innovation on the firm during the period 1997 – 1999. In Table 13.1, 94.1% of innovative firms indicated their opinion on the statement "Increased the productivity of the firm". Of these:

- 5.3 % strongly disagreed;
- 9.9 % disagreed;
- 25.3% were neutral;
- 36.6% agreed; and
- 22.9% strongly agreed with the statement.

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Table 13.1
Impact of Innovation on Firm During the Period 1997-1999
Impact by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Increased the productivity of the firm												
Total Manufacturing Industries	94.1	A	5.3	A	9.9	A	25.3	A	36.6	A	22.9	A
Food Manufacturing	94.5	A	4.6	A	13.3	A	28.3	A	31.4	A	22.4	A
Beverage and Tobacco Product Manufacturing	97.0	A	7.6	A	3.3	A	24.4	A	37.9	A	26.8	A
Textile Mills	97.9	A	9.1	A	12.0	A	30.3	A	33.7	A	15.0	A
Textile Product Mills	85.8	A	2.2	A	9.3	B	23.4	B	38.1	B	26.9	B
Clothing Manufacturing	88.5	A	3.2	A	10.0	A	33.6	A	31.1	A	22.0	A
Leather and Allied Product Manufacturing	98.2	A	3.7	A	10.1	B	24.5	B	36.7	B	25.1	B
Sawmills and Wood Preservation	97.3	A	12.1	A	8.1	A	14.2	A	30.1	A	35.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	97.3	A	9.3	A	10.5	A	29.8	B	21.9	B	28.5	B
Other Wood Product Manufacturing	88.1	A	2.6	A	12.2	A	23.5	A	32.9	A	28.7	A
Paper Manufacturing	93.3	A	7.2	A	11.7	A	22.0	A	32.4	A	26.7	A
Printing and Related Support Activities	99.1	A	4.3	A	6.6	A	25.3	A	42.1	B	21.8	A
Petroleum and Coal Products Manufacturing	95.1	A	5.1	A	17.9	A	41.0	A	30.8	A	5.1	A
Chemical Manufacturing (excluding 3254)	91.0	A	6.0	A	13.2	A	26.2	A	34.3	A	20.3	A
Pharmaceutical and Medicine Manufacturing (3254)	95.8	A	1.9	A	4.2	A	32.4	A	46.3	B	15.2	A
Plastics and Rubber Products Manufacturing	95.2	A	2.6	A	12.3	A	21.3	A	37.7	A	26.1	A
Non-Metallic Mineral Products Manufacturing	93.7	A	13.5	A	8.4	A	27.0	A	28.3	A	22.9	A
Primary Metal Manufacturing	94.7	A	4.3	A	4.7	A	18.9	A	45.9	A	26.1	A
Fabricated Metal Product Manufacturing	95.1	A	4.8	A	8.7	A	26.5	A	37.3	A	22.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	93.0	A	7.5	A	14.2	A	26.7	A	35.5	A	16.1	A
Machinery Manufacturing (excluding 3331 & 3332)	90.6	A	4.7	A	10.7	A	25.1	A	39.8	B	19.8	A
Computer and Peripheral Equipment Manufacturing	86.0	A	5.4	A	2.7	A	30.2	B	22.5	B	39.2	B
Communications Equipment Manufacturing	93.2	A	2.3	A	9.3	A	32.2	B	47.4	B	8.9	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	88.0	A	0.0	A	23.7	A	17.1	B	41.4	B	17.9	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	94.1	A	12.0	A	12.3	A	22.1	B	36.9	B	16.8	B
Electrical Equipment, Appliance and Component Manufacturing	95.7	A	3.3	A	14.0	A	25.1	A	35.2	A	22.4	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	95.1	A	3.3	A	6.9	A	22.6	A	43.0	B	24.3	A
Aerospace Product and Parts Manufacturing	100.0	A	5.6	A	0.0	A	33.2	B	37.1	B	24.1	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	2.9	A	7.9	A	14.9	B	53.0	B	21.4	B
Furniture and Related Products Manufacturing	97.7	A	1.4	A	7.0	A	24.1	A	40.7	A	26.8	A
Miscellaneous Manufacturing	92.8	A	8.8	A	8.3	A	23.6	B	40.8	B	18.5	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.1
Impact of Innovation on Firm During the Period 1997-1999
Impact by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Increased the profitability of the firm												
Total Manufacturing Industries	97.3	A	3.7	A	8.8	A	29.1	A	36.7	A	21.7	A
Food Manufacturing	97.5	A	5.7	A	13.2	A	30.6	A	31.8	A	18.6	A
Beverage and Tobacco Product Manufacturing	98.5	A	3.1	A	2.9	A	30.0	A	34.4	A	29.4	A
Textile Mills	99.3	A	2.9	A	7.3	A	32.4	A	34.4	A	23.0	A
Textile Product Mills	95.1	A	2.0	A	6.5	A	33.0	B	44.6	B	13.8	B
Clothing Manufacturing	92.2	A	3.5	A	7.3	A	44.1	A	34.2	A	10.9	A
Leather and Allied Product Manufacturing	98.2	A	0.0	A	11.6	B	36.7	B	35.8	B	15.9	B
Sawmills and Wood Preservation	99.0	A	6.4	A	5.0	A	19.8	A	35.3	A	33.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	100.0	A	4.6	A	4.1	A	33.8	B	32.1	B	25.5	B
Other Wood Product Manufacturing	95.5	A	2.2	A	9.5	A	32.5	A	28.2	A	27.7	A
Paper Manufacturing	95.6	A	5.8	A	8.0	A	19.4	A	37.8	A	29.0	A
Printing and Related Support Activities	98.3	A	4.9	A	11.2	A	28.4	B	35.1	B	20.5	A
Petroleum and Coal Products Manufacturing	97.6	A	2.5	A	10.0	A	35.0	A	35.0	A	17.5	A
Chemical Manufacturing (excluding 3254)	96.9	A	4.0	A	7.5	A	26.4	A	39.2	A	22.8	A
Pharmaceutical and Medicine Manufacturing (3254)	97.2	A	0.0	A	4.1	A	17.5	A	56.6	B	21.8	A
Plastics and Rubber Products Manufacturing	97.7	A	3.3	A	8.6	A	28.2	A	37.5	A	22.4	A
Non-Metallic Mineral Products Manufacturing	96.0	A	7.1	A	10.0	A	29.5	A	30.0	A	23.4	A
Primary Metal Manufacturing	97.0	A	2.0	A	6.6	A	18.7	A	48.7	A	24.1	A
Fabricated Metal Product Manufacturing	98.3	A	3.3	A	9.3	A	29.2	A	36.4	A	21.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	96.7	A	1.9	A	6.6	A	27.2	A	42.3	A	22.0	A
Machinery Manufacturing (excluding 3331 & 3332)	97.2	A	2.0	A	7.4	A	30.8	A	41.6	B	18.3	A
Computer and Peripheral Equipment Manufacturing	93.0	A	5.0	A	10.4	A	16.7	B	29.4	B	38.5	B
Communications Equipment Manufacturing	94.9	A	3.6	A	3.6	A	37.5	B	39.3	B	15.8	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	95.6	A	0.0	A	9.3	A	41.4	B	37.7	B	11.7	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0	A	3.8	A	6.6	A	34.7	B	43.0	B	11.9	A
Electrical Equipment, Appliance and Component Manufacturing	97.1	A	2.1	A	4.1	A	27.0	A	39.6	A	27.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	97.6	A	2.0	A	9.1	A	22.3	A	42.2	B	24.5	A
Aerospace Product and Parts Manufacturing	100.0	A	2.0	A	8.8	A	18.2	B	46.8	B	24.3	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	100.0	A	4.9	B	5.5	A	30.2	B	39.6	B	19.9	B
Furniture and Related Products Manufacturing	98.5	A	2.6	A	7.7	A	30.2	A	34.3	A	25.2	A
Miscellaneous Manufacturing	97.6	A	5.0	A	13.5	A	28.0	B	32.4	B	21.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.1
Impact of Innovation on Firm During the Period 1997-1999
Impact by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Increased the speed of supplying and/or delivering products (goods or services)												
Total Manufacturing Industries	91.1	A	7.3	A	16.1	A	28.5	A	30.8	A	17.3	A
Food Manufacturing	86.2	A	11.8	A	26.5	A	28.2	A	24.1	A	9.5	A
Beverage and Tobacco Product Manufacturing	95.8	A	9.3	A	13.9	A	40.4	A	24.9	A	11.5	A
Textile Mills	97.9	A	7.5	A	20.5	A	34.8	A	26.2	A	11.0	A
Textile Product Mills	92.1	A	2.1	A	11.7	B	36.4	B	28.0	B	21.8	B
Clothing Manufacturing	90.3	A	4.3	A	11.8	A	30.3	A	36.9	A	16.8	A
Leather and Allied Product Manufacturing	98.2	A	12.5	A	8.3	B	28.1	B	42.5	B	8.6	A
Sawmills and Wood Preservation	85.7	A	20.1	A	14.9	A	23.5	A	23.3	A	18.0	A
Veneer, Plywood and Engineered Wood Product Manufacturing	86.4	A	10.6	A	19.2	B	29.4	B	18.7	A	22.0	B
Other Wood Product Manufacturing	84.7	A	5.8	A	16.6	A	28.1	B	34.7	B	14.8	A
Paper Manufacturing	89.6	A	14.3	A	15.7	A	23.5	A	28.5	A	18.0	A
Printing and Related Support Activities	96.5	A	4.7	A	7.9	A	22.9	A	41.4	B	23.1	A
Petroleum and Coal Products Manufacturing	85.4	A	22.9	A	34.3	A	34.3	A	8.6	A	0.0	A
Chemical Manufacturing (excluding 3254)	84.7	A	11.5	A	24.3	A	30.6	A	25.1	A	8.5	A
Pharmaceutical and Medicine Manufacturing (3254)	80.8	B	14.3	B	19.7	A	38.7	B	17.4	A	9.9	A
Plastics and Rubber Products Manufacturing	92.5	A	5.1	A	16.1	A	30.3	A	31.1	A	17.4	A
Non-Metallic Mineral Products Manufacturing	83.6	A	14.9	A	16.7	A	22.5	A	25.2	A	20.8	A
Primary Metal Manufacturing	89.2	A	6.6	A	13.7	A	30.7	A	30.1	A	18.9	A
Fabricated Metal Product Manufacturing	94.7	A	5.0	A	14.5	A	31.9	A	28.3	A	20.3	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	90.6	A	5.5	A	21.4	A	32.7	A	25.2	A	15.2	A
Machinery Manufacturing (excluding 3331 & 3332)	89.5	A	3.4	A	15.4	A	23.4	A	40.1	B	17.8	A
Computer and Peripheral Equipment Manufacturing	88.4	A	5.9	A	25.4	B	23.2	B	22.4	B	23.0	B
Communications Equipment Manufacturing	88.4	B	6.6	A	18.8	B	32.9	B	28.5	B	13.3	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	85.9	B	6.3	A	7.7	A	37.1	B	38.7	B	10.3	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	94.6	A	6.1	A	18.6	B	25.5	B	37.8	B	12.1	A
Electrical Equipment, Appliance and Component Manufacturing	96.9	A	3.6	A	12.3	A	24.9	A	40.9	A	18.3	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	91.9	A	7.4	A	13.0	A	29.5	A	36.1	B	14.1	A
Aerospace Product and Parts Manufacturing	100.0	A	3.9	A	8.5	A	36.7	B	33.2	B	17.8	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	91.0	B	9.2	B	11.0	A	23.4	B	39.7	B	16.8	B
Furniture and Related Products Manufacturing	96.8	A	3.5	A	15.9	A	25.5	A	29.2	A	25.9	A
Miscellaneous Manufacturing	94.3	A	7.2	A	12.4	A	31.4	B	28.0	B	20.9	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.1
Impact of Innovation on Firm During the Period 1997-1999
Impact by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Increased the firm's ability to adapt flexibly to different client demands												
Total Manufacturing Industries	94.1	A	1.9	A	7.5	A	23.2	A	43.2	A	24.2	A
Food Manufacturing	93.8	A	2.2	A	12.0	A	25.0	A	41.2	A	19.6	A
Beverage and Tobacco Product Manufacturing	98.6	A	3.1	A	18.6	A	31.3	A	35.0	A	12.0	A
Textile Mills	97.8	A	1.5	A	2.9	A	22.1	A	43.0	A	30.4	A
Textile Product Mills	95.6	A	2.9	A	4.7	A	31.0	B	49.3	B	12.1	B
Clothing Manufacturing	90.1	A	2.0	A	3.7	A	22.9	A	42.6	A	28.8	A
Leather and Allied Product Manufacturing	94.9	A	1.9	A	1.9	A	20.3	B	52.8	B	23.1	B
Sawmills and Wood Preservation	94.7	A	5.2	A	9.1	A	27.3	A	38.3	A	20.2	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.4	A	4.5	A	12.5	A	17.0	A	46.9	B	19.2	A
Other Wood Product Manufacturing	93.4	A	0.0	A	7.8	A	24.5	A	42.5	A	25.2	A
Paper Manufacturing	96.3	A	5.0	A	5.3	A	20.2	A	42.1	A	27.4	A
Printing and Related Support Activities	95.6	A	0.0	A	3.1	A	23.1	A	43.5	B	30.3	B
Petroleum and Coal Products Manufacturing	92.7	A	7.9	A	7.9	A	26.3	A	36.8	A	21.1	A
Chemical Manufacturing (excluding 3254)	91.4	A	0.8	A	11.0	A	20.8	A	45.3	A	22.1	A
Pharmaceutical and Medicine Manufacturing (3254)	92.6	A	2.3	A	6.3	A	27.4	A	54.3	B	9.7	A
Plastics and Rubber Products Manufacturing	93.3	A	2.8	A	5.7	A	25.0	A	40.7	A	25.8	A
Non-Metallic Mineral Products Manufacturing	92.9	A	2.1	A	6.2	A	20.0	A	41.0	A	30.7	A
Primary Metal Manufacturing	92.4	A	3.4	A	9.6	A	23.9	A	40.5	A	22.5	A
Fabricated Metal Product Manufacturing	93.5	A	1.3	A	7.8	A	27.2	A	37.2	A	26.5	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	97.2	A	2.6	A	7.3	A	23.9	A	43.6	A	22.6	A
Machinery Manufacturing (excluding 3331 & 3332)	92.9	A	1.0	A	8.8	A	18.9	A	50.3	B	21.1	A
Computer and Peripheral Equipment Manufacturing	90.7	A	2.6	A	2.6	A	23.5	B	43.8	B	27.6	B
Communications Equipment Manufacturing	90.1	A	0.0	A	10.4	A	11.0	A	63.6	B	15.0	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	84.8	A	0.0	A	2.5	A	28.2	B	48.5	B	20.8	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	91.5	A	1.0	A	5.9	A	23.8	B	52.0	B	17.3	A
Electrical Equipment, Appliance and Component Manufacturing	98.1	A	0.0	A	6.0	A	21.9	A	48.4	A	23.8	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	93.6	A	2.9	A	7.9	A	17.9	A	51.0	B	20.3	A
Aerospace Product and Parts Manufacturing	100.0	A	1.9	A	3.6	A	19.5	B	49.9	B	25.1	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	95.4	A	5.7	B	8.8	B	18.5	B	56.4	B	10.6	A
Furniture and Related Products Manufacturing	98.4	A	0.9	A	6.5	A	24.4	A	41.7	A	26.5	A
Miscellaneous Manufacturing	94.0	A	2.0	A	10.3	A	17.8	A	39.9	B	30.0	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.1
Impact of Innovation on Firm During the Period 1997-1999
Impact by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Increased the firm's domestic market share												
Total Manufacturing Industries	93.0	A	7.0	A	14.0	A	30.4	A	32.5	A	16.1	A
Food Manufacturing	92.9	A	7.0	A	15.3	A	24.5	A	34.6	A	18.6	A
Beverage and Tobacco Product Manufacturing	97.2	A	1.4	A	23.6	A	28.0	A	22.6	A	24.3	A
Textile Mills	91.2	A	6.4	A	17.4	A	33.5	A	37.9	A	4.8	A
Textile Product Mills	90.8	A	5.0	A	11.6	A	30.6	B	39.1	B	13.7	B
Clothing Manufacturing	91.0	A	5.7	A	15.0	A	32.3	A	30.9	A	16.1	A
Leather and Allied Product Manufacturing	89.5	B	2.0	A	7.4	B	37.9	B	31.2	B	21.5	B
Sawmills and Wood Preservation	95.2	A	12.6	A	17.3	A	32.3	A	22.9	A	14.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.4	A	9.3	A	24.1	B	24.1	B	27.6	B	14.9	A
Other Wood Product Manufacturing	88.3	A	6.2	A	16.9	A	38.7	B	22.0	A	16.2	A
Paper Manufacturing	96.8	A	13.2	A	13.5	A	23.7	A	31.5	A	18.0	A
Printing and Related Support Activities	93.5	A	4.6	A	14.1	A	31.7	B	32.8	B	16.9	A
Petroleum and Coal Products Manufacturing	85.4	A	5.7	A	22.9	A	42.9	A	22.9	A	5.7	A
Chemical Manufacturing (excluding 3254)	93.2	A	7.9	A	15.8	A	26.9	A	38.6	A	10.8	A
Pharmaceutical and Medicine Manufacturing (3254)	98.1	A	4.1	A	9.8	A	26.2	A	32.7	B	27.3	A
Plastics and Rubber Products Manufacturing	94.2	A	4.4	A	13.4	A	32.3	A	33.8	A	16.2	A
Non-Metallic Mineral Products Manufacturing	93.3	A	10.2	A	10.4	A	35.2	A	24.1	A	20.1	A
Primary Metal Manufacturing	92.3	A	6.7	A	17.7	A	29.5	A	30.8	A	15.3	A
Fabricated Metal Product Manufacturing	93.9	A	9.1	A	13.3	A	32.0	A	30.4	A	15.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	94.4	A	6.5	A	12.8	A	21.3	A	43.1	A	16.4	A
Machinery Manufacturing (excluding 3331 & 3332)	92.5	A	7.8	A	13.3	A	30.9	A	33.7	A	14.3	A
Computer and Peripheral Equipment Manufacturing	93.0	A	10.0	A	15.6	A	10.8	B	29.4	B	34.2	B
Communications Equipment Manufacturing	85.2	A	4.0	A	17.2	B	27.3	B	36.5	B	15.0	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	86.6	A	10.2	A	7.8	A	51.4	B	20.3	B	10.2	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	89.8	A	6.5	A	13.3	A	22.3	B	53.0	B	4.9	A
Electrical Equipment, Appliance and Component Manufacturing	94.1	A	9.1	A	13.5	A	30.7	A	28.2	A	18.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	91.8	A	5.9	A	9.4	A	29.7	B	38.3	B	16.8	A
Aerospace Product and Parts Manufacturing	92.8	A	6.0	A	17.8	B	28.1	B	39.5	B	8.6	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	94.8	B	6.7	A	4.3	B	31.4	B	48.1	B	9.4	B
Furniture and Related Products Manufacturing	93.8	A	2.2	A	12.3	A	40.1	A	30.2	A	15.2	A
Miscellaneous Manufacturing	91.2	A	7.3	A	12.8	A	23.6	B	30.9	B	25.4	B

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Impact by Industry
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Increased the firm's international market share												
Total Manufacturing Industries	80.4	A	13.9	A	15.2	A	23.6	A	29.9	A	17.4	A
Food Manufacturing	76.9	A	26.0	A	16.3	A	23.0	A	23.5	A	11.1	A
Beverage and Tobacco Product Manufacturing	70.8	A	28.9	A	35.8	B	12.5	A	16.5	A	6.4	A
Textile Mills	84.1	A	7.8	A	18.0	A	27.8	A	29.8	A	16.6	A
Textile Product Mills	74.5	B	7.5	A	14.6	B	23.3	B	41.9	B	12.7	B
Clothing Manufacturing	70.9	A	7.5	A	14.3	A	27.4	A	28.9	A	21.9	A
Leather and Allied Product Manufacturing	86.2	B	17.4	B	30.0	B	12.5	B	38.0	B	2.1	A
Sawmills and Wood Preservation	88.3	A	14.2	A	16.7	A	23.7	A	23.6	A	21.9	A
Veneer, Plywood and Engineered Wood Product Manufacturing	92.4	A	9.3	A	21.7	B	22.9	B	27.6	B	18.4	A
Other Wood Product Manufacturing	79.6	A	10.8	A	15.4	A	21.5	A	28.0	B	24.3	A
Paper Manufacturing	81.0	A	18.8	A	16.4	A	20.8	A	26.5	A	17.4	A
Printing and Related Support Activities	77.9	A	27.3	B	17.3	A	18.2	B	22.1	A	15.1	A
Petroleum and Coal Products Manufacturing	73.2	A	23.3	A	16.7	A	20.0	A	36.7	A	3.3	A
Chemical Manufacturing (excluding 3254)	76.1	A	14.6	A	24.6	A	21.4	A	26.4	A	12.9	A
Pharmaceutical and Medicine Manufacturing (3254)	71.8	B	5.5	A	18.7	B	15.6	A	40.9	B	19.2	A
Plastics and Rubber Products Manufacturing	88.8	A	5.9	A	17.0	A	24.1	A	29.9	A	23.1	A
Non-Metallic Mineral Products Manufacturing	59.5	A	25.0	A	6.1	A	28.4	B	19.0	A	21.5	B
Primary Metal Manufacturing	84.3	A	12.3	A	12.4	A	26.5	A	29.3	A	19.5	A
Fabricated Metal Product Manufacturing	77.8	A	15.4	A	15.2	A	26.6	A	26.9	A	15.8	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	89.4	A	3.8	A	9.1	A	28.3	A	38.3	A	20.5	A
Machinery Manufacturing (excluding 3331 & 3332)	89.3	A	7.0	A	12.8	A	26.7	A	36.2	B	17.3	A
Computer and Peripheral Equipment Manufacturing	95.0	A	13.3	B	19.4	B	15.7	B	24.9	A	26.7	B
Communications Equipment Manufacturing	90.6	A	3.7	A	4.7	A	11.6	A	48.7	B	31.3	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	80.0	B	2.7	A	8.1	A	25.9	B	46.6	B	16.8	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	86.6	A	5.3	A	14.6	A	18.2	A	44.4	B	17.5	B
Electrical Equipment, Appliance and Component Manufacturing	87.6	A	9.7	A	8.1	A	29.3	A	33.7	A	19.2	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	81.5	A	13.3	A	17.5	A	22.8	B	34.9	B	11.6	A
Aerospace Product and Parts Manufacturing	87.8	A	13.7	B	18.3	B	23.0	B	32.7	B	12.4	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	79.7	B	9.4	B	11.8	B	16.8	B	46.2	B	15.9	B
Furniture and Related Products Manufacturing	81.5	A	12.2	A	11.5	A	24.2	A	33.8	B	18.3	A
Miscellaneous Manufacturing	78.0	A	14.4	A	12.0	A	19.1	B	33.0	B	21.5	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.1

Impact of Innovation on Firm During the Period 1997-1999

Impact by Industry

Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Allowed the firm to maintain profit margins												
Total Manufacturing Industries	96.0	A	2.7	A	7.9	A	28.1	A	39.0	A	22.2	A
Food Manufacturing	95.0	A	4.3	A	12.0	A	27.2	A	40.2	A	16.2	A
Beverage and Tobacco Product Manufacturing	97.0	A	3.2	A	10.0	A	25.2	A	34.4	A	27.2	A
Textile Mills	98.6	A	0.7	A	10.5	A	30.0	A	37.2	A	21.6	A
Textile Product Mills	95.1	A	1.0	A	6.6	A	18.6	B	46.6	B	27.2	B
Clothing Manufacturing	92.6	A	2.7	A	4.9	A	41.1	A	35.1	A	16.3	A
Leather and Allied Product Manufacturing	91.6	A	2.0	A	20.7	B	30.2	B	26.2	B	21.0	B
Sawmills and Wood Preservation	97.3	A	3.0	A	6.3	A	17.2	A	39.9	A	33.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.4	A	1.6	A	13.9	A	30.3	B	29.9	B	24.3	B
Other Wood Product Manufacturing	95.5	A	3.0	A	3.8	A	35.3	A	32.3	A	25.7	A
Paper Manufacturing	97.2	A	2.1	A	8.6	A	25.6	A	40.3	A	23.4	A
Printing and Related Support Activities	97.0	A	2.9	A	8.6	A	32.3	B	32.5	B	23.8	A
Petroleum and Coal Products Manufacturing	95.1	A	0.0	A	15.4	A	23.1	A	51.3	A	10.3	A
Chemical Manufacturing (excluding 3254)	94.9	A	3.1	A	3.6	A	26.9	A	47.9	A	18.5	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	0.0	A	0.0	A	16.6	A	57.7	B	25.7	A
Plastics and Rubber Products Manufacturing	96.8	A	2.9	A	9.0	A	25.8	A	35.9	A	26.5	A
Non-Metallic Mineral Products Manufacturing	95.5	A	3.8	A	9.8	A	23.1	A	33.9	A	29.4	A
Primary Metal Manufacturing	96.1	A	1.3	A	9.6	A	18.9	A	42.5	A	27.6	A
Fabricated Metal Product Manufacturing	96.2	A	2.8	A	8.3	A	30.4	A	35.9	A	22.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	96.6	A	3.4	A	4.9	A	25.7	A	41.0	A	25.0	A
Machinery Manufacturing (excluding 3331 & 3332)	94.8	A	0.8	A	6.9	A	29.3	A	44.7	B	18.2	A
Computer and Peripheral Equipment Manufacturing	93.0	A	0.0	A	5.0	A	30.4	B	41.0	B	23.5	B
Communications Equipment Manufacturing	96.7	A	7.8	A	8.1	A	23.7	B	45.9	B	14.5	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	93.3	A	2.3	A	0.0	A	38.9	B	38.6	B	20.2	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	95.1	A	0.0	A	4.2	A	31.8	B	45.1	B	18.9	A
Electrical Equipment, Appliance and Component Manufacturing	95.4	A	0.6	A	7.1	A	29.6	A	34.7	A	28.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	95.9	A	1.2	A	12.5	A	20.8	A	45.1	B	20.4	A
Aerospace Product and Parts Manufacturing	98.1	A	3.3	A	7.9	A	20.8	B	54.6	B	13.4	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	94.5	A	4.2	B	2.2	A	26.0	B	60.0	B	7.6	A
Furniture and Related Products Manufacturing	97.8	A	2.9	A	7.9	A	30.2	A	36.7	A	22.3	A
Miscellaneous Manufacturing	98.2	A	5.3	A	4.7	A	27.1	B	38.7	B	24.2	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.1

Impact of Innovation on Firm During the Period 1997-1999

Impact by Industry

Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Allowed the firm to keep up with competitors												
Total Manufacturing Industries	96.4	A	1.4	A	3.6	A	15.6	A	44.3	A	35.2	A
Food Manufacturing	95.2	A	1.9	A	2.9	A	19.2	A	43.3	A	32.7	A
Beverage and Tobacco Product Manufacturing	94.9	A	1.7	A	0.0	A	17.9	A	37.1	A	43.3	A
Textile Mills	98.5	A	0.0	A	3.0	A	11.2	A	52.8	A	33.0	A
Textile Product Mills	100.0	A	1.9	A	0.0	A	18.4	B	52.7	B	27.1	B
Clothing Manufacturing	95.4	A	1.1	A	2.3	A	25.8	A	40.9	A	29.9	A
Leather and Allied Product Manufacturing	94.6	A	1.9	A	7.0	A	21.9	B	28.9	B	40.3	B
Sawmills and Wood Preservation	95.4	A	2.0	A	1.3	A	19.6	A	40.5	A	36.6	A
Veneer, Plywood and Engineered Wood Product Manufacturing	98.4	A	1.6	A	11.1	A	15.5	A	38.3	B	33.4	B
Other Wood Product Manufacturing	93.1	A	4.1	A	5.9	A	15.0	A	38.0	A	36.9	B
Paper Manufacturing	96.0	A	1.5	A	4.8	A	11.4	A	47.1	A	35.3	A
Printing and Related Support Activities	97.8	A	0.9	A	5.3	A	11.6	A	43.5	B	38.8	B
Petroleum and Coal Products Manufacturing	95.1	A	0.0	A	12.8	A	15.4	A	59.0	A	12.8	A
Chemical Manufacturing (excluding 3254)	95.3	A	0.5	A	3.6	A	9.7	A	49.7	A	36.5	A
Pharmaceutical and Medicine Manufacturing (3254)	100.0	A	0.0	A	0.0	A	11.7	A	53.0	B	35.3	A
Plastics and Rubber Products Manufacturing	97.2	A	1.7	A	1.6	A	17.2	A	38.5	A	41.0	A
Non-Metallic Mineral Products Manufacturing	96.4	A	2.3	A	3.7	A	13.1	A	39.8	A	41.1	A
Primary Metal Manufacturing	97.0	A	1.3	A	2.5	A	14.4	A	49.2	A	32.5	A
Fabricated Metal Product Manufacturing	96.7	A	2.1	A	5.2	A	16.1	A	44.5	A	32.2	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	97.3	A	0.0	A	2.9	A	16.1	A	39.3	A	41.7	A
Machinery Manufacturing (excluding 3331 & 3332)	95.0	A	0.5	A	3.8	A	13.0	A	52.5	B	30.2	A
Computer and Peripheral Equipment Manufacturing	95.3	A	0.0	A	0.0	A	5.9	B	47.4	B	46.7	B
Communications Equipment Manufacturing	96.7	A	0.0	A	1.7	A	22.9	B	34.8	B	40.6	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	95.6	A	2.3	A	0.0	A	6.8	A	52.6	B	38.4	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	96.1	A	0.0	A	3.1	A	19.3	A	40.7	B	36.9	B
Electrical Equipment, Appliance and Component Manufacturing	97.9	A	0.0	A	2.6	A	19.1	A	35.6	A	42.6	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	95.9	A	0.5	A	2.0	A	14.6	A	48.2	B	34.8	B
Aerospace Product and Parts Manufacturing	100.0	A	0.0	A	6.6	A	13.5	B	49.8	B	30.1	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	98.0	A	2.0	A	0.0	A	11.0	B	58.4	B	28.5	B
Furniture and Related Products Manufacturing	98.2	A	1.5	A	5.3	A	15.0	A	47.0	A	31.1	A
Miscellaneous Manufacturing	95.3	A	1.9	A	3.1	A	12.7	A	40.4	B	41.9	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.2

Impact of Innovation on Firm During the Period 1997-1999

Industry by Impact

Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries												
Increased the productivity of the firm	94.1	A	5.3	A	9.9	A	25.3	A	36.6	A	22.9	A
Increased the profitability of the firm	97.3	A	3.7	A	8.8	A	29.1	A	36.7	A	21.7	A
Increased the speed of supplying and/or delivering products (goods or services)	91.1	A	7.3	A	16.1	A	28.5	A	30.8	A	17.3	A
Increased the firm's ability to adapt flexibly to different client demands	94.1	A	1.9	A	7.5	A	23.2	A	43.2	A	24.2	A
Increased the firm's domestic market share	93.0	A	7.0	A	14.0	A	30.4	A	32.5	A	16.1	A
Increased the firm's international market share	60.4	A	13.9	A	15.2	A	23.6	A	29.9	A	17.4	A
Allowed the firm to maintain profit margins	96.0	A	2.7	A	7.9	A	28.1	A	39.0	A	22.2	A
Allowed the firm to keep up with competitors	96.4	A	1.4	A	3.6	A	15.6	A	44.3	A	35.2	A
Food Manufacturing												
Increased the productivity of the firm	94.5	A	4.6	A	13.3	A	28.3	A	31.4	A	22.4	A
Increased the profitability of the firm	97.5	A	5.7	A	13.2	A	30.6	A	31.8	A	18.6	A
Increased the speed of supplying and/or delivering products (goods or services)	86.2	A	11.8	A	26.5	A	28.2	A	24.1	A	9.5	A
Increased the firm's ability to adapt flexibly to different client demands	93.8	A	2.2	A	12.0	A	25.0	A	41.2	A	19.6	A
Increased the firm's domestic market share	92.9	A	7.0	A	15.3	A	24.5	A	34.6	A	18.6	A
Increased the firm's international market share	76.9	A	26.0	A	16.3	A	23.0	A	23.5	A	11.1	A
Allowed the firm to maintain profit margins	95.0	A	4.3	A	12.0	A	27.2	A	40.2	A	16.2	A
Allowed the firm to keep up with competitors	95.2	A	1.9	A	2.9	A	19.2	A	43.3	A	32.7	A
Beverage and Tobacco Product Manufacturing												
Increased the productivity of the firm	97.0	A	7.6	A	3.3	A	24.4	A	37.9	A	26.8	A
Increased the profitability of the firm	98.5	A	3.1	A	2.9	A	30.0	A	34.4	A	29.4	A
Increased the speed of supplying and/or delivering products (goods or services)	95.8	A	9.3	A	13.9	A	40.4	A	24.9	A	11.5	A
Increased the firm's ability to adapt flexibly to different client demands	98.6	A	3.1	A	18.6	A	31.3	A	35.0	A	12.0	A
Increased the firm's domestic market share	97.2	A	1.4	A	23.6	A	28.0	A	22.6	A	24.3	A
Increased the firm's international market share	70.8	A	28.9	A	35.8	B	12.5	A	16.5	A	6.4	A
Allowed the firm to maintain profit margins	97.0	A	3.2	A	10.0	A	25.2	A	34.4	A	27.2	A
Allowed the firm to keep up with competitors	94.9	A	1.7	A	0.0	A	17.9	A	37.1	A	43.3	A
Textile Mills												
Increased the productivity of the firm	97.9	A	9.1	A	12.0	A	30.3	A	33.7	A	15.0	A
Increased the profitability of the firm	99.3	A	2.9	A	7.3	A	32.4	A	34.4	A	23.0	A
Increased the speed of supplying and/or delivering products (goods or services)	97.9	A	7.5	A	20.5	A	34.8	A	26.2	A	11.0	A
Increased the firm's ability to adapt flexibly to different client demands	97.8	A	1.5	A	2.9	A	22.1	A	43.0	A	30.4	A
Increased the firm's domestic market share	91.2	A	6.4	A	17.4	A	33.5	A	37.9	A	4.8	A
Increased the firm's international market share	84.1	A	7.8	A	18.0	A	27.8	A	29.8	A	16.6	A
Allowed the firm to maintain profit margins	98.6	A	0.7	A	10.5	A	30.0	A	37.2	A	21.6	A
Allowed the firm to keep up with competitors	98.5	A	0.0	A	3.0	A	11.2	A	52.8	A	33.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.2
Impact of Innovation on Firm During the Period 1997-1999
Industry by Impact
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Textile Product Mills												
Increased the productivity of the firm	85.8	A	2.2	A	9.3	B	23.4	B	38.1	B	26.9	B
Increased the profitability of the firm	95.1	A	2.0	A	6.5	A	33.0	B	44.6	B	13.8	B
Increased the speed of supplying and/or delivering products (goods or services)	92.1	A	2.1	A	11.7	B	36.4	B	28.0	B	21.8	B
Increased the firm's ability to adapt flexibly to different client demands	95.6	A	2.9	A	4.7	A	31.0	B	49.3	B	12.1	B
Increased the firm's domestic market share	90.8	A	5.0	A	11.6	A	30.6	B	39.1	B	13.7	B
Increased the firm's international market share	74.5	B	7.5	A	14.6	B	23.3	B	41.9	B	12.7	B
Allowed the firm to maintain profit margins	95.1	A	1.0	A	6.6	A	18.6	B	46.6	B	27.2	B
Allowed the firm to keep up with competitors	100.0	A	1.9	A	0.0	A	18.4	B	52.7	B	27.1	B
Clothing Manufacturing												
Increased the productivity of the firm	88.5	A	3.2	A	10.0	A	33.6	A	31.1	A	22.0	A
Increased the profitability of the firm	92.2	A	3.5	A	7.3	A	44.1	A	34.2	A	10.9	A
Increased the speed of supplying and/or delivering products (goods or services)	90.3	A	4.3	A	11.8	A	30.3	A	36.9	A	16.8	A
Increased the firm's ability to adapt flexibly to different client demands	90.1	A	2.0	A	3.7	A	22.9	A	42.6	A	28.8	A
Increased the firm's domestic market share	91.0	A	5.7	A	15.0	A	32.3	A	30.9	A	16.1	A
Increased the firm's international market share	70.9	A	7.5	A	14.3	A	27.4	A	28.9	A	21.9	A
Allowed the firm to maintain profit margins	92.6	A	2.7	A	4.9	A	41.1	A	35.1	A	16.3	A
Allowed the firm to keep up with competitors	95.4	A	1.1	A	2.3	A	25.6	A	40.9	A	29.9	A
Leather and Allied Product Manufacturing												
Increased the productivity of the firm	98.2	A	3.7	A	10.1	B	24.5	B	36.7	B	25.1	B
Increased the profitability of the firm	98.2	A	0.0	A	11.6	B	36.7	B	35.8	B	15.9	B
Increased the speed of supplying and/or delivering products (goods or services)	98.2	A	12.5	A	8.3	B	28.1	B	42.5	B	8.6	A
Increased the firm's ability to adapt flexibly to different client demands	94.9	A	1.9	A	1.9	A	20.3	B	52.8	B	23.1	B
Increased the firm's domestic market share	89.5	B	2.0	A	7.4	B	37.9	B	31.2	B	21.5	B
Increased the firm's international market share	86.2	B	17.4	B	30.0	B	12.5	B	38.0	B	2.1	A
Allowed the firm to maintain profit margins	91.6	A	2.0	A	20.7	B	30.2	B	26.2	B	21.0	B
Allowed the firm to keep up with competitors	94.6	A	1.9	A	7.0	A	21.9	B	28.9	B	40.3	B
Sawmills and Wood Preservation												
Increased the productivity of the firm	97.3	A	12.1	A	8.1	A	14.2	A	30.1	A	35.5	A
Increased the profitability of the firm	99.0	A	6.4	A	5.0	A	19.8	A	35.3	A	33.5	A
Increased the speed of supplying and/or delivering products (goods or services)	85.7	A	20.1	A	14.9	A	23.5	A	23.3	A	18.0	A
Increased the firm's ability to adapt flexibly to different client demands	94.7	A	5.2	A	9.1	A	27.3	A	38.3	A	20.2	A
Increased the firm's domestic market share	95.2	A	12.6	A	17.3	A	32.3	A	22.9	A	14.9	A
Increased the firm's international market share	88.3	A	14.2	A	16.7	A	23.7	A	23.6	A	21.9	A
Allowed the firm to maintain profit margins	97.3	A	3.0	A	6.3	A	17.2	A	39.9	A	33.5	A
Allowed the firm to keep up with competitors	95.4	A	2.0	A	1.3	A	19.6	A	40.5	A	36.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.2
Impact of Innovation on Firm During the Period 1997-1999
Industry by Impact
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Veneer, Plywood and Engineered Wood Product Manufacturing												
Increased the productivity of the firm	97.3	A	9.3	A	10.5	A	29.8	B	21.9	B	28.5	B
Increased the profitability of the firm	100.0	A	4.6	A	4.1	A	33.8	B	32.1	B	25.5	B
Increased the speed of supplying and/or delivering products (goods or services)	86.4	A	10.6	A	19.2	B	29.4	B	18.7	A	22.0	B
Increased the firm's ability to adapt flexibly to different client demands	98.4	A	4.5	A	12.5	A	17.0	A	46.9	B	19.2	A
Increased the firm's domestic market share	98.4	A	9.3	A	24.1	B	24.1	B	27.6	B	14.9	A
Increased the firm's international market share	92.4	A	9.3	A	21.7	B	22.9	B	27.6	B	18.4	A
Allowed the firm to maintain profit margins	98.4	A	1.6	A	13.9	A	30.3	B	29.9	B	24.3	B
Allowed the firm to keep up with competitors	98.4	A	1.6	A	11.1	A	15.5	A	38.3	B	33.4	B
Other Wood Product Manufacturing												
Increased the productivity of the firm	88.1	A	2.6	A	12.2	A	23.5	A	32.9	A	28.7	A
Increased the profitability of the firm	95.5	A	2.2	A	9.5	A	32.5	A	28.2	A	27.7	A
Increased the speed of supplying and/or delivering products (goods or services)	84.7	A	5.8	A	16.6	A	28.1	B	34.7	B	14.8	A
Increased the firm's ability to adapt flexibly to different client demands	93.4	A	0.0	A	7.8	A	24.5	A	42.5	A	25.2	A
Increased the firm's domestic market share	88.3	A	6.2	A	16.9	A	38.7	B	22.0	A	16.2	A
Increased the firm's international market share	79.6	A	10.8	A	15.4	A	21.5	A	28.0	B	24.3	A
Allowed the firm to maintain profit margins	95.5	A	3.0	A	3.8	A	35.3	A	32.3	A	25.7	A
Allowed the firm to keep up with competitors	93.1	A	4.1	A	5.9	A	15.0	A	38.0	A	36.9	B
Paper Manufacturing												
Increased the productivity of the firm	93.3	A	7.2	A	11.7	A	22.0	A	32.4	A	26.7	A
Increased the profitability of the firm	95.6	A	5.8	A	8.0	A	19.4	A	37.8	A	29.0	A
Increased the speed of supplying and/or delivering products (goods or services)	89.6	A	14.3	A	15.7	A	23.5	A	28.5	A	18.0	A
Increased the firm's ability to adapt flexibly to different client demands	96.3	A	5.0	A	5.3	A	20.2	A	42.1	A	27.4	A
Increased the firm's domestic market share	96.8	A	13.2	A	13.5	A	23.7	A	31.5	A	18.0	A
Increased the firm's international market share	81.0	A	18.8	A	16.4	A	20.8	A	26.5	A	17.4	A
Allowed the firm to maintain profit margins	97.2	A	2.1	A	8.6	A	25.6	A	40.3	A	23.4	A
Allowed the firm to keep up with competitors	96.0	A	1.5	A	4.8	A	11.4	A	47.1	A	35.3	A
Printing and Related Support Activities												
Increased the productivity of the firm	99.1	A	4.3	A	6.6	A	25.3	A	42.1	B	21.8	A
Increased the profitability of the firm	98.3	A	4.9	A	11.2	A	28.4	B	35.1	B	20.5	A
Increased the speed of supplying and/or delivering products (goods or services)	96.5	A	4.7	A	7.9	A	22.9	A	41.4	B	23.1	A
Increased the firm's ability to adapt flexibly to different client demands	95.6	A	0.0	A	3.1	A	23.1	A	43.5	B	30.3	B
Increased the firm's domestic market share	93.5	A	4.6	A	14.1	A	31.7	B	32.8	B	16.9	A
Increased the firm's international market share	77.9	A	27.3	B	17.3	A	18.2	B	22.1	A	15.1	A
Allowed the firm to maintain profit margins	97.0	A	2.9	A	8.6	A	32.3	B	32.5	B	23.8	A
Allowed the firm to keep up with competitors	97.8	A	0.9	A	5.3	A	11.6	A	43.5	B	38.8	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.2

Impact of Innovation on Firm During the Period 1997-1999

Industry by Impact

Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing												
Increased the productivity of the firm	95.1	A	5.1	A	17.9	A	41.0	A	30.8	A	5.1	A
Increased the profitability of the firm	97.6	A	2.5	A	10.0	A	35.0	A	35.0	A	17.5	A
Increased the speed of supplying and/or delivering products (goods or services)	85.4	A	22.9	A	34.3	A	34.3	A	8.6	A	0.0	A
Increased the firm's ability to adapt flexibly to different client demands	92.7	A	7.9	A	7.9	A	26.3	A	36.8	A	21.1	A
Increased the firm's domestic market share	85.4	A	5.7	A	22.9	A	42.9	A	22.9	A	5.7	A
Increased the firm's international market share	73.2	A	23.3	A	16.7	A	20.0	A	36.7	A	3.3	A
Allowed the firm to maintain profit margins	95.1	A	0.0	A	15.4	A	23.1	A	51.3	A	10.3	A
Allowed the firm to keep up with competitors	95.1	A	0.0	A	12.8	A	15.4	A	59.0	A	12.8	A
Chemical Manufacturing (excluding 3254)												
Increased the productivity of the firm	91.0	A	6.0	A	13.2	A	26.2	A	34.3	A	20.3	A
Increased the profitability of the firm	96.9	A	4.0	A	7.5	A	26.4	A	39.2	A	22.8	A
Increased the speed of supplying and/or delivering products (goods or services)	84.7	A	11.5	A	24.3	A	30.6	A	25.1	A	8.5	A
Increased the firm's ability to adapt flexibly to different client demands	91.4	A	0.8	A	11.0	A	20.8	A	45.3	A	22.1	A
Increased the firm's domestic market share	93.2	A	7.9	A	15.8	A	26.9	A	38.6	A	10.8	A
Increased the firm's international market share	76.1	A	14.6	A	24.6	A	21.4	A	26.4	A	12.9	A
Allowed the firm to maintain profit margins	94.9	A	3.1	A	3.6	A	26.9	A	47.9	A	18.5	A
Allowed the firm to keep up with competitors	95.3	A	0.5	A	3.6	A	9.7	A	49.7	A	36.5	A
Pharmaceutical and Medicine Manufacturing (3254)												
Increased the productivity of the firm	95.8	A	1.9	A	4.2	A	32.4	A	46.3	B	15.2	A
Increased the profitability of the firm	97.2	A	0.0	A	4.1	A	17.5	A	56.6	B	21.8	A
Increased the speed of supplying and/or delivering products (goods or services)	80.8	B	14.3	B	19.7	A	38.7	B	17.4	A	9.9	A
Increased the firm's ability to adapt flexibly to different client demands	92.6	A	2.3	A	6.3	A	27.4	A	54.3	B	9.7	A
Increased the firm's domestic market share	98.1	A	4.1	A	9.8	A	26.2	A	32.7	B	27.3	A
Increased the firm's international market share	71.8	B	5.5	A	18.7	B	15.6	A	40.9	B	19.2	A
Allowed the firm to maintain profit margins	100.0	A	0.0	A	0.0	A	16.6	A	57.7	B	25.7	A
Allowed the firm to keep up with competitors	100.0	A	0.0	A	0.0	A	11.7	A	53.0	B	35.3	A
Plastics and Rubber Products Manufacturing												
Increased the productivity of the firm	95.2	A	2.6	A	12.3	A	21.3	A	37.7	A	26.1	A
Increased the profitability of the firm	97.7	A	3.3	A	8.6	A	28.2	A	37.5	A	22.4	A
Increased the speed of supplying and/or delivering products (goods or services)	92.5	A	5.1	A	16.1	A	30.3	A	31.1	A	17.4	A
Increased the firm's ability to adapt flexibly to different client demands	93.3	A	2.8	A	5.7	A	25.0	A	40.7	A	25.8	A
Increased the firm's domestic market share	94.2	A	4.4	A	13.4	A	32.3	A	33.8	A	16.2	A
Increased the firm's international market share	88.8	A	5.9	A	17.0	A	24.1	A	29.9	A	23.1	A
Allowed the firm to maintain profit margins	96.8	A	2.9	A	9.0	A	25.8	A	35.9	A	26.5	A
Allowed the firm to keep up with competitors	97.2	A	1.7	A	1.6	A	17.2	A	38.5	A	41.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.2
Impact of Innovation on Firm During the Period 1997-1999
Industry by Impact
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Non-Metallic Mineral Products Manufacturing												
Increased the productivity of the firm	93.7	A	13.5	A	8.4	A	27.0	A	28.3	A	22.9	A
Increased the profitability of the firm	96.0	A	7.1	A	10.0	A	29.5	A	30.0	A	23.4	A
Increased the speed of supplying and/or delivering products (goods or services)	83.6	A	14.9	A	16.7	A	22.5	A	25.2	A	20.8	A
Increased the firm's ability to adapt flexibly to different client demands	92.9	A	2.1	A	6.2	A	20.0	A	41.0	A	30.7	A
Increased the firm's domestic market share	93.3	A	10.2	A	10.4	A	35.2	A	24.1	A	20.1	A
Increased the firm's international market share	59.5	A	25.0	A	6.1	A	28.4	B	19.0	A	21.5	B
Allowed the firm to maintain profit margins	95.5	A	3.8	A	9.8	A	23.1	A	33.9	A	29.4	A
Allowed the firm to keep up with competitors	96.4	A	2.3	A	3.7	A	13.1	A	39.8	A	41.1	A
Primary Metal Manufacturing												
Increased the productivity of the firm	94.7	A	4.3	A	4.7	A	18.9	A	45.9	A	26.1	A
Increased the profitability of the firm	97.0	A	2.0	A	6.6	A	18.7	A	48.7	A	24.1	A
Increased the speed of supplying and/or delivering products (goods or services)	89.2	A	6.6	A	13.7	A	30.7	A	30.1	A	18.9	A
Increased the firm's ability to adapt flexibly to different client demands	92.4	A	3.4	A	9.6	A	23.9	A	40.5	A	22.5	A
Increased the firm's domestic market share	92.3	A	6.7	A	17.7	A	29.5	A	30.8	A	15.3	A
Increased the firm's international market share	84.3	A	12.3	A	12.4	A	26.5	A	29.3	A	19.5	A
Allowed the firm to maintain profit margins	96.1	A	1.3	A	9.6	A	18.9	A	42.5	A	27.6	A
Allowed the firm to keep up with competitors	97.0	A	1.3	A	2.5	A	14.4	A	49.2	A	32.5	A
Fabricated Metal Product Manufacturing												
Increased the productivity of the firm	95.1	A	4.8	A	8.7	A	26.5	A	37.3	A	22.7	A
Increased the profitability of the firm	98.3	A	3.3	A	9.3	A	29.2	A	36.4	A	21.7	A
Increased the speed of supplying and/or delivering products (goods or services)	94.7	A	5.0	A	14.5	A	31.9	A	28.3	A	20.3	A
Increased the firm's ability to adapt flexibly to different client demands	93.5	A	1.3	A	7.8	A	27.2	A	37.2	A	26.5	A
Increased the firm's domestic market share	93.9	A	9.1	A	13.3	A	32.0	A	30.4	A	15.1	A
Increased the firm's international market share	77.8	A	15.4	A	15.2	A	26.6	A	26.9	A	15.8	A
Allowed the firm to maintain profit margins	96.2	A	2.8	A	8.3	A	30.4	A	35.9	A	22.6	A
Allowed the firm to keep up with competitors	96.7	A	2.1	A	5.2	A	16.1	A	44.5	A	32.2	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)												
Increased the productivity of the firm	93.0	A	7.5	A	14.2	A	26.7	A	35.5	A	16.1	A
Increased the profitability of the firm	96.7	A	1.9	A	6.6	A	27.2	A	42.3	A	22.0	A
Increased the speed of supplying and/or delivering products (goods or services)	90.6	A	5.5	A	21.4	A	32.7	A	25.2	A	15.2	A
Increased the firm's ability to adapt flexibly to different client demands	97.2	A	2.6	A	7.3	A	23.9	A	43.6	A	22.6	A
Increased the firm's domestic market share	94.4	A	6.5	A	12.8	A	21.3	A	43.1	A	16.4	A
Increased the firm's international market share	89.4	A	3.8	A	9.1	A	28.3	A	38.3	A	20.5	A
Allowed the firm to maintain profit margins	96.6	A	3.4	A	4.9	A	25.7	A	41.0	A	25.0	A
Allowed the firm to keep up with competitors	97.3	A	0.0	A	2.9	A	16.1	A	39.3	A	41.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.2

Impact of Innovation on Firm During the Period 1997-1999

Industry by Impact

Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)												
Increased the productivity of the firm	90.6	A	4.7	A	10.7	A	25.1	A	39.8	B	19.8	A
Increased the profitability of the firm	97.2	A	2.0	A	7.4	A	30.8	A	41.6	B	18.3	A
Increased the speed of supplying and/or delivering products (goods or services)	89.5	A	3.4	A	15.4	A	23.4	A	40.1	B	17.8	A
Increased the firm's ability to adapt flexibly to different client demands	92.9	A	1.0	A	8.8	A	18.9	A	50.3	B	21.1	A
Increased the firm's domestic market share	92.5	A	7.8	A	13.3	A	30.9	A	33.7	A	14.3	A
Increased the firm's international market share	89.3	A	7.0	A	12.8	A	26.7	A	36.2	B	17.3	A
Allowed the firm to maintain profit margins	94.8	A	0.8	A	6.9	A	29.3	A	44.7	B	18.2	A
Allowed the firm to keep up with competitors	95.0	A	0.5	A	3.8	A	13.0	A	52.5	B	30.2	A
Computer and Peripheral Equipment Manufacturing												
Increased the productivity of the firm	86.0	A	5.4	A	2.7	A	30.2	B	22.5	B	39.2	B
Increased the profitability of the firm	93.0	A	5.0	A	10.4	A	16.7	B	29.4	B	38.5	B
Increased the speed of supplying and/or delivering products (goods or services)	88.4	A	5.9	A	25.4	B	23.2	B	22.4	B	23.0	B
Increased the firm's ability to adapt flexibly to different client demands	90.7	A	2.6	A	2.6	A	23.5	B	43.8	B	27.6	B
Increased the firm's domestic market share	93.0	A	10.0	A	15.6	A	10.8	B	29.4	B	34.2	B
Increased the firm's international market share	95.0	A	13.3	B	19.4	B	15.7	B	24.9	A	26.7	B
Allowed the firm to maintain profit margins	93.0	A	0.0	A	5.0	A	30.4	B	41.0	B	23.5	B
Allowed the firm to keep up with competitors	95.3	A	0.0	A	0.0	A	5.9	B	47.4	B	46.7	B
Communications Equipment Manufacturing												
Increased the productivity of the firm	93.2	A	2.3	A	9.3	A	32.2	B	47.4	B	8.9	A
Increased the profitability of the firm	94.9	A	3.6	A	3.6	A	37.5	B	39.3	B	15.8	A
Increased the speed of supplying and/or delivering products (goods or services)	88.4	B	6.6	A	18.8	B	32.9	B	28.5	B	13.3	A
Increased the firm's ability to adapt flexibly to different client demands	90.1	A	0.0	A	10.4	A	11.0	A	63.6	B	15.0	A
Increased the firm's domestic market share	85.2	A	4.0	A	17.2	B	27.3	B	36.5	B	15.0	B
Increased the firm's international market share	90.6	A	3.7	A	4.7	A	11.6	A	48.7	B	31.3	B
Allowed the firm to maintain profit margins	96.7	A	7.8	A	8.1	A	23.7	B	45.9	B	14.5	A
Allowed the firm to keep up with competitors	96.7	A	0.0	A	1.7	A	22.9	B	34.8	B	40.6	B
Audio and Video Equipment Manufacturing												
Increased the productivity of the firm	x	A	x	A	x	A	x	A	x	A	x	A
Increased the profitability of the firm	x	A	x	A	x	A	x	A	x	A	x	A
Increased the speed of supplying and/or delivering products (goods or services)	x	A	x	A	x	A	x	A	x	A	x	A
Increased the firm's ability to adapt flexibly to different client demands	x	A	x	A	x	A	x	A	x	A	x	A
Increased the firm's domestic market share	x	A	x	A	x	A	x	A	x	A	x	A
Increased the firm's international market share	x	A	x	A	x	A	x	A	x	A	x	A
Allowed the firm to maintain profit margins	x	A	x	A	x	A	x	A	x	A	x	A
Allowed the firm to keep up with competitors	x	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.2
Impact of Innovation on Firm During the Period 1997-1999
Industry by Impact
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing												
Increased the productivity of the firm	88.0	A	0.0	A	23.7	A	17.1	B	41.4	B	17.9	A
Increased the profitability of the firm	95.6	A	0.0	A	9.3	A	41.4	B	37.7	B	11.7	A
Increased the speed of supplying and/or delivering products (goods or services)	85.9	B	6.3	A	7.7	A	37.1	B	38.7	B	10.3	A
Increased the firm's ability to adapt flexibly to different client demands	84.8	A	0.0	A	2.5	A	28.2	B	48.5	B	20.8	B
Increased the firm's domestic market share	86.6	A	10.2	A	7.8	A	51.4	B	20.3	B	10.2	A
Increased the firm's international market share	80.0	B	2.7	A	8.1	A	25.9	B	46.6	B	16.8	B
Allowed the firm to maintain profit margins	93.3	A	2.3	A	0.0	A	38.9	B	38.6	B	20.2	A
Allowed the firm to keep up with competitors	95.6	A	2.3	A	0.0	A	6.8	A	52.6	B	38.4	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media												
Increased the productivity of the firm	94.1	A	12.0	A	12.3	A	22.1	B	36.9	B	16.8	B
Increased the profitability of the firm	100.0	A	3.8	A	6.6	A	34.7	B	43.0	B	11.9	A
Increased the speed of supplying and/or delivering products (goods or services)	94.6	A	6.1	A	18.6	B	25.5	B	37.8	B	12.1	A
Increased the firm's ability to adapt flexibly to different client demands	91.5	A	1.0	A	5.9	A	23.8	B	52.0	B	17.3	A
Increased the firm's domestic market share	89.8	A	6.5	A	13.3	A	22.3	B	53.0	B	4.9	A
Increased the firm's international market share	86.6	A	5.3	A	14.6	A	18.2	A	44.4	B	17.5	B
Allowed the firm to maintain profit margins	95.1	A	0.0	A	4.2	A	31.8	B	45.1	B	18.9	A
Allowed the firm to keep up with competitors	96.1	A	0.0	A	3.1	A	19.3	A	40.7	B	36.9	B
Electrical Equipment, Appliance and Component Manufacturing												
Increased the productivity of the firm	95.7	A	3.3	A	14.0	A	25.1	A	35.2	A	22.4	A
Increased the profitability of the firm	97.1	A	2.1	A	4.1	A	27.0	A	39.6	A	27.1	A
Increased the speed of supplying and/or delivering products (goods or services)	96.9	A	3.6	A	12.3	A	24.9	A	40.9	A	18.3	A
Increased the firm's ability to adapt flexibly to different client demands	98.1	A	0.0	A	6.0	A	21.9	A	48.4	A	23.8	A
Increased the firm's domestic market share	94.1	A	9.1	A	13.5	A	30.7	A	28.2	A	18.5	A
Increased the firm's international market share	87.6	A	9.7	A	8.1	A	29.3	A	33.7	A	19.2	A
Allowed the firm to maintain profit margins	95.4	A	0.6	A	7.1	A	29.6	A	34.7	A	28.1	A
Allowed the firm to keep up with competitors	97.9	A	0.0	A	2.6	A	19.1	A	35.6	A	42.6	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing												
Increased the productivity of the firm	95.1	A	3.3	A	6.9	A	22.6	A	43.0	B	24.3	A
Increased the profitability of the firm	97.6	A	2.0	A	9.1	A	22.3	A	42.2	B	24.5	A
Increased the speed of supplying and/or delivering products (goods or services)	91.9	A	7.4	A	13.0	A	29.5	A	36.1	B	14.1	A
Increased the firm's ability to adapt flexibly to different client demands	93.6	A	2.9	A	7.9	A	17.9	A	51.0	B	20.3	A
Increased the firm's domestic market share	91.8	A	5.9	A	9.4	A	29.7	B	38.3	B	16.8	A
Increased the firm's international market share	81.5	A	13.3	A	17.5	A	22.8	B	34.9	B	11.6	A
Allowed the firm to maintain profit margins	95.9	A	1.2	A	12.5	A	20.8	A	45.1	B	20.4	A
Allowed the firm to keep up with competitors	95.9	A	0.5	A	2.0	A	14.6	A	48.2	B	34.8	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 13.2
Impact of Innovation on Firm During the Period 1997-1999
Industry by Impact
Canada, Innovators in Manufacturing

	Relevant		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Aerospace Product and Parts Manufacturing												
Increased the productivity of the firm	100.0	A	5.6	A	0.0	A	33.2	B	37.1	B	24.1	B
Increased the profitability of the firm	100.0	A	2.0	A	8.8	A	18.2	B	46.8	B	24.3	B
Increased the speed of supplying and/or delivering products (goods or services)	100.0	A	3.9	A	8.5	A	36.7	B	33.2	B	17.8	B
Increased the firm's ability to adapt flexibly to different client demands	100.0	A	1.9	A	3.6	A	19.5	B	49.9	B	25.1	B
Increased the firm's domestic market share	92.8	A	6.0	A	17.8	B	28.1	B	39.5	B	8.6	A
Increased the firm's international market share	87.8	A	13.7	B	18.3	B	23.0	B	32.7	B	12.4	A
Allowed the firm to maintain profit margins	98.1	A	3.3	A	7.9	A	20.8	B	54.6	B	13.4	B
Allowed the firm to keep up with competitors	100.0	A	0.0	A	6.6	A	13.5	B	49.8	B	30.1	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment												
Increased the productivity of the firm	100.0	A	2.9	A	7.9	A	14.9	B	53.0	B	21.4	B
Increased the profitability of the firm	100.0	A	4.9	B	5.5	A	30.2	B	39.6	B	19.9	B
Increased the speed of supplying and/or delivering products (goods or services)	91.0	B	9.2	B	11.0	A	23.4	B	39.7	B	16.8	B
Increased the firm's ability to adapt flexibly to different client demands	95.4	A	5.7	B	8.8	B	18.5	B	56.4	B	10.6	A
Increased the firm's domestic market share	94.8	B	6.7	A	4.3	B	31.4	B	48.1	B	9.4	B
Increased the firm's international market share	79.7	B	9.4	B	11.8	B	16.8	B	46.2	B	15.9	B
Allowed the firm to maintain profit margins	94.5	A	4.2	B	2.2	A	26.0	B	60.0	B	7.6	A
Allowed the firm to keep up with competitors	98.0	A	2.0	A	0.0	A	11.0	B	58.4	B	28.5	B
Furniture and Related Products Manufacturing												
Increased the productivity of the firm	97.7	A	1.4	A	7.0	A	24.1	A	40.7	A	26.8	A
Increased the profitability of the firm	98.5	A	2.6	A	7.7	A	30.2	A	34.3	A	25.2	A
Increased the speed of supplying and/or delivering products (goods or services)	96.8	A	3.5	A	15.9	A	25.5	A	29.2	A	25.9	A
Increased the firm's ability to adapt flexibly to different client demands	98.4	A	0.9	A	6.5	A	24.4	A	41.7	A	26.5	A
Increased the firm's domestic market share	93.8	A	2.2	A	12.3	A	40.1	A	30.2	A	15.2	A
Increased the firm's international market share	81.5	A	12.2	A	11.5	A	24.2	A	33.8	B	18.3	A
Allowed the firm to maintain profit margins	97.8	A	2.9	A	7.9	A	30.2	A	36.7	A	22.3	A
Allowed the firm to keep up with competitors	98.2	A	1.5	A	5.3	A	15.0	A	47.0	A	31.1	A
Miscellaneous Manufacturing												
Increased the productivity of the firm	92.8	A	8.8	A	8.3	A	23.6	B	40.8	B	18.5	B
Increased the profitability of the firm	97.6	A	5.0	A	13.5	A	28.0	B	32.4	B	21.0	A
Increased the speed of supplying and/or delivering products (goods or services)	94.3	A	7.2	A	12.4	A	31.4	B	28.0	B	20.9	B
Increased the firm's ability to adapt flexibly to different client demands	94.0	A	2.0	A	10.3	A	17.8	A	39.9	B	30.0	B
Increased the firm's domestic market share	91.2	A	7.3	A	12.8	A	23.6	B	30.9	B	25.4	B
Increased the firm's international market share	78.0	A	14.4	A	12.0	A	19.1	B	33.0	B	21.5	B
Allowed the firm to maintain profit margins	98.2	A	5.3	A	4.7	A	27.1	B	38.7	B	24.2	B
Allowed the firm to keep up with competitors	95.3	A	1.9	A	3.1	A	12.7	A	40.4	B	41.9	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 14, 15 and 16

Users should note that respondents could choose any number of reasons as being important in determining the involvement of the firm in cooperative and/or collaborative arrangement to develop new or significantly improved products (goods or services) and/or production/manufacturing processes during the three year period 1997 - 1999. As a result, percentages do not add up to 100. Respondents could also choose many cooperators/collaborators and more than one location for each of these cooperators/collaborators.

Data for Questions 14, 15 and 16 are presented in a series of six tables. All tables are for innovators in manufacturing. The following contains an explanation of how to read these tables using 'Total Manufacturing Industries' as an example.

In Table 14.1, for 'Total Manufacturing Industries', 33.0% of innovative firms have cooperative and/or collaborative arrangements.

In Table 14.2 for innovators in manufacturing, 33.0% of firms have cooperative and/or collaborative arrangements. Of these:

- 55.3% are single location firms; and
- 44.7% are multiple location firms.

In Table 14.3, for 'Total Manufacturing Industries', 33.0% of innovative firms have cooperative and/or collaborative arrangements. Of these:

- 41.5% indicated that sharing costs was a reason for having these arrangements;
- 26.8% indicated that spreading risk was a reason for having these arrangements;
- 52.2% indicated that accessing research and development was a reason for having these arrangements;
- …and so on…

Also, for 'Total Manufacturing Industries', of the 33.0% of innovative firms having cooperative and/or collaborative arrangements, 40.4% of single location firms indicated that sharing costs was a reason to have these arrangements whereas 42.9% of multiple location firms indicated that sharing costs was a reason to have cooperative and/or collaborative arrangements.

Tables 14.4.1, 14.4.2, and 14.4.3 examine with whom, and where innovative firms in manufacturing had cooperative and/or collaborative arrangements. Table 14.4.1 is for all innovative firms that had cooperative and/or collaborative arrangements, Table 14.4.2 is for single Canadian location innovative firms that had cooperative and/or collaborative arrangements, and Table 14.4.3 is for innovative firms with more than one Canadian location that had cooperative and/or collaborative arrangements.

In Table 14.4.1, for 'Total Manufacturing Industries', 33.0% of innovative firms have cooperative and/or collaborative arrangements. Of which:

- 87.7% had cooperators and/or collaborators in Canada;
- 64.8% had cooperators and/or collaborators in the United States;
- 33.4% had cooperators and/or collaborators in Europe;
- 16.7% had cooperators and/or collaborators in the Pacific Rim; and
- 8.8% had cooperators and/or collaborators elsewhere.

Also, for 'Total Manufacturing Industries', of the 33.0% of innovative firms having cooperative and/or collaborative arrangements:

- 35.3% had these arrangements with their competitors of which:
  - 67.0% had cooperators and/or collaborators in Canada;
  - 51.8% had cooperators and/or collaborators in the Unites States;
  - 28.2% had cooperators and/or collaborators in Europe;
  - 12.0% had cooperators and/or collaborators in the Pacific Rim; and
  - 6.2% had cooperators and/or collaborators elsewhere.
- 64.9% had these arrangements with their clients of which:
  - 78.7% had cooperators and/or collaborators in Canada;
  - 60.8% had cooperators and/or collaborators in the Unites States;
  - 22.2% had cooperators and/or collaborators in Europe;
  - 14.5% had cooperators and/or collaborators in the Pacific Rim; and
  - 8.4% had cooperators and/or collaborators elsewhere.
- ...and so on...

For Table 14.4.2, for innovators in manufacturing, 33.0% of firms have cooperative and/or collaborative arrangements. Of which:

- 55.3% of these firms had only one location of which:
  - 60.8% had cooperators and/or collaborators within 100 km;
  - 49.4% had cooperators and/or collaborators in the rest of their province;
  - 44.7% had cooperators and/or collaborators in the rest of Canada;
  - 57.0% had cooperators and/or collaborators in the United States;
  - 26.6% had cooperators and/or collaborators in Europe;
  - 12.9% had cooperators and/or collaborators in the Pacific Rim; and
  - 5.5% had cooperators and/or collaborators elsewhere.

Also, 33.0% of innovative firms in manufacturing have cooperative and/or collaborative arrangements of which:

- 55.3% had only one location of which:
  - 35.4% had these arrangements with their competitors of which:
    - 37.2% had cooperators and/or collaborators within 100 km;

    - 28.1% had cooperators and/or collaborators in the rest of their province;
    - 29.8% had cooperators and/or collaborators in the rest of Canada;
    - 46.9% had cooperators and/or collaborators in the United States;
    - 25.6% had cooperators and/or collaborators in Europe;
    - 10.0% had cooperators and/or collaborators in the Pacific Rim; and
    - 4.8% had cooperators and/or collaborators elsewhere.
  - 65.7% had these arrangements with their clients of which:
    - 43.6% had cooperators and/or collaborators within 100 km;
    - 35.4% had cooperators and/or collaborators in the rest of their province;
    - 42.9% had cooperators and/or collaborators in the rest of Canada;

…and so on…

For Table 14.4.3, for 'Total Manufacturing Industries', 33.0% of innovative firms have cooperative and/or collaborative arrangements. Of which:

- 44.7% of these firms had more than one location for which:
  - 87.7% had cooperators and/or collaborators in the rest of Canada;
  - 74.5% had cooperators and/or collaborators in the United States;
  - 41.8% had cooperators and/or collaborators in Europe;
  - 21.5% had cooperators and/or collaborators in the Pacific Rim; and
  - 12.8% had cooperators and/or collaborators elsewhere.

Also, 33.0% of all innovative firms in 'Total Manufacturing Industries' have cooperative and/or collaborative arrangements of which:

- 44.7% had more than one location of which:
  - 35.2% had these arrangements with their competitors for which:
    - 63.2% were located in Canada;
    - 57.9% were located in the United States;
    - 31.5% were located in Europe;
    - 14.5% were located in the Pacific Rim; and
    - 8.0% were located elsewhere.
  - 64.0% had these arrangements with their clients of which:
    - 78.6% were located in Canada;
    - 67.5% were located in the United States;
    - 26.8% were located in Europe;
    - …and so on…

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Table 14.1

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, All Firms

	Percent	Reliability
Total Manufacturing Industries	33.0	A
Food Manufacturing	32.1	A
Beverage and Tobacco Product Manufacturing	49.7	A
Textile Mills	32.0	A
Textile Product Mills	36.4	B
Clothing Manufacturing	15.9	A
Leather and Allied Product Manufacturing	36.3	B
Sawmills and Wood Preservation	22.1	A
Veneer, Plywood and Engineered Wood Product Manufacturing	40.2	B
Other Wood Product Manufacturing	18.0	A
Paper Manufacturing	39.0	A
Printing and Related Support Activities	26.9	A
Petroleum and Coal Products Manufacturing	34.1	A
Chemical Manufacturing (excluding 3254)	39.3	A
Pharmaceutical and Medicine Manufacturing (3254)	61.4	B
Plastics and Rubber Products Manufacturing	33.4	A
Non-Metallic Mineral Products Manufacturing	32.4	A
Primary Metal Manufacturing	39.0	A
Fabricated Metal Product Manufacturing	30.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	40.0	A
Machinery Manufacturing (excluding 3331 & 3332)	38.7	B
Computer and Peripheral Equipment Manufacturing	53.1	B
Communications Equipment Manufacturing	46.9	B
Audio and Video Equipment Manufacturing	x	A
Semiconductor and Other Electronic Equipment Manufacturing	56.5	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	50.1	B
Electrical Equipment, Appliance and Component Manufacturing	44.1	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	38.0	B
Aerospace Product and Parts Manufacturing	50.9	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	41.7	B
Furniture and Related Products Manufacturing	20.3	A
Miscellaneous Manufacturing	34.3	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.2

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, Distribution of Single and Multiple Location Firms

	Innovative Firms					
	All		Single Location		Multiple Location	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	33.0	A	55.3	A	44.7	A
Food Manufacturing	32.1	A	46.2	B	53.8	B
Beverage and Tobacco Product Manufacturing	49.7	A	39.6	B	60.4	B
Textile Mills	32.0	A	72.7	B	27.3	B
Textile Product Mills	36.4	B	77.1	B	22.9	B
Clothing Manufacturing	15.9	A	63.5	B	36.5	B
Leather and Allied Product Manufacturing	36.3	B	62.8	B	37.2	B
Sawmills and Wood Preservation	22.1	A	63.4	B	36.6	B
Veneer, Plywood and Engineered Wood Product Manufacturing	40.2	B	54.9	B	45.1	B
Other Wood Product Manufacturing	18.0	A	76.9	B	23.1	B
Paper Manufacturing	39.0	A	41.1	B	58.9	B
Printing and Related Support Activities	26.9	A	39.4	B	60.6	B
Petroleum and Coal Products Manufacturing	34.1	A	28.6	A	71.4	A
Chemical Manufacturing (excluding 3254)	39.3	A	49.2	B	50.8	B
Pharmaceutical and Medicine Manufacturing (3254)	61.4	B	54.4	B	45.6	B
Plastics and Rubber Products Manufacturing	33.4	A	57.1	B	42.9	B
Non-Metallic Mineral Products Manufacturing	32.4	A	40.6	B	59.4	B
Primary Metal Manufacturing	39.0	A	66.0	B	34.0	B
Fabricated Metal Product Manufacturing	30.4	A	60.8	B	39.2	B
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	40.0	A	64.4	B	35.6	B
Machinery Manufacturing (excluding 3331 & 3332)	38.7	B	65.3	B	34.7	B
Computer and Peripheral Equipment Manufacturing	53.1	B	49.6	B	50.4	B
Communications Equipment Manufacturing	46.9	B	54.0	B	46.0	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	56.5	B	37.4	B	62.6	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	50.1	B	53.8	B	46.2	B
Electrical Equipment, Appliance and Component Manufacturing	44.1	A	56.8	B	43.2	B
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	38.0	B	66.0	B	34.0	B
Aerospace Product and Parts Manufacturing	50.9	B	32.2	B	67.8	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	41.7	B	54.3	C	45.7	C
Furniture and Related Products Manufacturing	20.3	A	61.2	B	38.8	B
Miscellaneous Manufacturing	34.3	B	47.9	B	52.1	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.3

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, Reasons by All, Single and Multiple Location Firms

	Innovative Firms					
	All		Single Location		Multiple Location	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries						
% Having Cooperative or Collaborative Arrangements	33.0	A				
Reasons for Having Arrangements						
Sharing costs	41.5	A	40.4	A	42.9	A
Spreading risk	26.8	A	25.3	A	28.7	A
Accessing research and development R&D	52.2	A	48.6	A	56.7	A
Prototype development	47.9	A	49.7	A	45.5	A
Scaling-up production processes	24.3	A	21.6	A	27.5	A
Accessing critical expertise	55.1	A	54.9	A	55.4	A
Accessing new markets	44.5	A	42.5	A	47.0	A
Accessing new distribution channels	25.6	A	25.1	A	26.2	A
Other	6.0	A	5.1	A	6.9	A
Food Manufacturing						
% Having Cooperative or Collaborative Arrangements	32.1	A				
Reasons for Having Arrangements						
Sharing costs	46.8	B	50.7	B	43.4	B
Spreading risk	26.8	B	25.4	B	28.0	B
Accessing research and development R&D	55.6	B	54.8	B	56.3	B
Prototype development	39.8	B	34.5	B	44.3	B
Scaling-up production processes	32.0	B	31.1	B	32.8	B
Accessing critical expertise	54.9	B	44.7	B	63.7	B
Accessing new markets	46.2	B	43.5	B	48.5	B
Accessing new distribution channels	36.5	B	32.3	B	40.1	B
Other	5.1	A	3.3	A	6.7	A
Beverage and Tobacco Product Manufacturing						
% Having Cooperative or Collaborative Arrangements	49.7	A				
Reasons for Having Arrangements						
Sharing costs	33.4	B	54.9	B	19.4	B
Spreading risk	8.6	A	7.0	A	9.6	A
Accessing research and development R&D	62.4	B	42.4	B	75.5	B
Prototype development	44.9	B	51.7	B	40.5	B
Scaling-up production processes	26.7	B	14.8	B	34.5	B
Accessing critical expertise	68.6	B	66.1	B	70.2	B
Accessing new markets	47.8	B	57.2	B	41.7	B
Accessing new distribution channels	17.8	B	14.4	B	20.0	B
Other	15.3	A	0.0	A	25.3	B
Textile Mills						
% Having Cooperative or Collaborative Arrangements	32.0	A				
Reasons for Having Arrangements						
Sharing costs	33.6	B	33.9	B	32.6	C
Spreading risk	28.4	B	26.9	B	32.5	C
Accessing research and development R&D	55.9	B	55.3	B	57.7	C
Prototype development	51.3	B	55.2	B	40.7	C
Scaling-up production processes	33.3	B	33.2	B	33.3	C
Accessing critical expertise	60.1	B	61.1	B	57.6	C
Accessing new markets	53.8	B	58.4	B	41.4	C
Accessing new distribution channels	35.7	B	42.8	B	17.0	B
Other	11.1	B	9.2	A	16.2	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.3
Cooperative and Collaborative Arrangements During the Period 1997-1999
Innovators in Manufacturing
Canada, Reasons by All, Single and Multiple Location Firms

	Innovative Firms					
	All		Single Location		Multiple Location	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries						
% Having Cooperative or Collaborative Arrangements	33.0	A				
Reasons for Having Arrangements						
Sharing costs	41.5	A	40.4	A	42.9	A
Spreading risk	26.8	A	25.3	A	28.7	A
Accessing research and development R&D	52.2	A	48.6	A	56.7	A
Prototype development	47.9	A	49.7	A	45.5	A
Scaling-up production processes	24.3	A	21.6	A	27.5	A
Accessing critical expertise	55.1	A	54.9	A	55.4	A
Accessing new markets	44.5	A	42.5	A	47.0	A
Accessing new distribution channels	25.6	A	25.1	A	26.2	A
Other	6.0	A	5.1	A	6.9	A
Food Manufacturing						
% Having Cooperative or Collaborative Arrangements	32.1	A				
Reasons for Having Arrangements						
Sharing costs	46.8	B	50.7	B	43.4	B
Spreading risk	26.8	B	25.4	B	28.0	B
Accessing research and development R&D	55.6	B	54.8	B	56.3	B
Prototype development	39.8	B	34.5	B	44.3	B
Scaling-up production processes	32.0	B	31.1	B	32.8	B
Accessing critical expertise	54.9	B	44.7	B	63.7	B
Accessing new markets	46.2	B	43.5	B	48.5	B
Accessing new distribution channels	36.5	B	32.3	B	40.1	B
Other	5.1	A	3.3	A	6.7	A
Beverage and Tobacco Product Manufacturing						
% Having Cooperative or Collaborative Arrangements	49.7	A				
Reasons for Having Arrangements						
Sharing costs	33.4	B	54.9	B	19.4	B
Spreading risk	8.6	A	7.0	A	9.6	A
Accessing research and development R&D	62.4	B	42.4	B	75.5	B
Prototype development	44.9	B	51.7	B	40.5	B
Scaling-up production processes	26.7	B	14.8	B	34.5	B
Accessing critical expertise	68.6	B	66.1	B	70.2	B
Accessing new markets	47.8	B	57.2	B	41.7	B
Accessing new distribution channels	17.8	B	14.4	B	20.0	B
Other	15.3	A	0.0	A	25.3	B
Textile Mills						
% Having Cooperative or Collaborative Arrangements	32.0	A				
Reasons for Having Arrangements						
Sharing costs	33.6	B	33.9	B	32.6	C
Spreading risk	28.4	B	26.9	B	32.5	C
Accessing research and development R&D	55.9	B	55.3	B	57.7	C
Prototype development	51.3	B	55.2	B	40.7	C
Scaling-up production processes	33.3	B	33.2	B	33.3	C
Accessing critical expertise	60.1	B	61.1	B	57.6	C
Accessing new markets	53.8	B	58.4	B	41.4	C
Accessing new distribution channels	35.7	B	42.8	B	17.0	B
Other	11.1	B	9.2	A	16.2	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.3

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, Reasons by All, Single and Multiple Location Firms

	Innovative Firms					
	All		Single Location		Multiple Location	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Textile Product Mills						
% Having Cooperative or Collaborative Arrangements	36.4	B				
Reasons for Having Arrangements						
Sharing costs	41.1	B	46.6	B	22.4	C
Spreading risk	31.9	B	34.8	B	22.4	C
Accessing research and development R&D	47.4	B	51.5	B	33.3	C
Prototype development	65.9	B	68.9	B	55.9	C
Scaling-up production processes	26.4	B	27.6	B	22.4	C
Accessing critical expertise	47.1	B	54.5	B	22.0	C
Accessing new markets	57.6	B	64.8	C	...	D
Accessing new distribution channels	41.5	B	53.9	B	0.0	A
Other	7.1	B	9.2	B	0.0	A
Clothing Manufacturing						
% Having Cooperative or Collaborative Arrangements	15.9	A				
Reasons for Having Arrangements						
Sharing costs	28.7	B	18.1	B	47.0	C
Spreading risk	22.4	B	26.4	B	15.5	B
Accessing research and development R&D	25.9	B	37.5	B	5.8	B
Prototype development	43.2	B	43.1	B	43.5	C
Scaling-up production processes	25.8	B	31.1	B	16.6	B
Accessing critical expertise	40.5	B	36.9	B	46.9	C
Accessing new markets	59.7	B	48.8	B	78.6	C
Accessing new distribution channels	39.7	B	50.4	B	21.0	C
Other	13.9	B	19.2	B	4.8	B
Leather and Allied Product Manufacturing						
% Having Cooperative or Collaborative Arrangements	36.3	B				
Reasons for Having Arrangements						
Sharing costs	24.0	B	7.9	B	51.1	C
Spreading risk	24.0	B	7.9	B	51.1	C
Accessing research and development R&D	38.8	B	31.6	C	51.1	C
Prototype development	71.1	B	92.1	B	35.6	C
Scaling-up production processes	28.1	B	23.7	C	35.6	C
Accessing critical expertise	75.2	B	68.4	C	86.7	C
Accessing new markets	19.8	B	31.6	C	0.0	A
Accessing new distribution channels	9.9	B	15.8	B	0.0	A
Other	5.0	B	7.9	B	0.0	A
Sawmills and Wood Preservation						
% Having Cooperative or Collaborative Arrangements	22.1	A				
Reasons for Having Arrangements						
Sharing costs	33.8	B	46.1	B	12.5	B
Spreading risk	33.5	B	35.1	B	30.8	B
Accessing research and development R&D	45.0	B	44.0	B	46.6	B
Prototype development	25.8	B	30.0	B	18.4	B
Scaling-up production processes	16.6	B	15.2	B	18.9	B
Accessing critical expertise	42.8	B	45.9	B	37.5	B
Accessing new markets	48.8	B	48.2	B	49.7	C
Accessing new distribution channels	28.1	B	37.2	B	12.5	B
Other	7.0	B	5.5	B	9.6	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.3

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, Reasons by All, Single and Multiple Location Firms

	Innovative Firms					
	All		Single Location		Multiple Location	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Veneer, Plywood and Engineered Wood Product Manufacturing						
% Having Cooperative or Collaborative Arrangements	40.2	B				
Reasons for Having Arrangements						
Sharing costs	49.0	B	50.3	B	47.4	B
Spreading risk	18.3	B	19.6	B	16.8	B
Accessing research and development R&D	69.3	B	72.4	B	65.5	B
Prototype development	51.9	B	66.7	B	33.9	B
Scaling-up production processes	19.3	B	13.8	B	26.0	B
Accessing critical expertise	51.7	B	60.2	B	41.4	B
Accessing new markets	30.5	B	22.1	B	40.6	B
Accessing new distribution channels	11.3	B	0.0	A	25.1	B
Other	7.7	B	0.0	A	17.2	B
Other Wood Product Manufacturing						
% Having Cooperative or Collaborative Arrangements	18.0	A				
Reasons for Having Arrangements						
Sharing costs	22.9	B	11.3	B	61.4	C
Spreading risk	9.6	B	4.5	A	...	D
Accessing research and development R&D	63.5	B	72.1	B	...	D
Prototype development	44.1	B	46.8	B	...	D
Scaling-up production processes	27.3	B	17.0	B	61.4	C
Accessing critical expertise	60.0	B	63.5	B	...	D
Accessing new markets	44.2	B	31.4	B	86.8	C
Accessing new distribution channels	24.8	B	25.1	B	23.8	C
Other	2.6	A	3.4	B	0.0	A
Paper Manufacturing						
% Having Cooperative or Collaborative Arrangements	39.0	A				
Reasons for Having Arrangements						
Sharing costs	35.7	B	32.2	B	38.2	B
Spreading risk	21.4	A	21.4	B	21.4	B
Accessing research and development R&D	63.5	B	54.2	B	70.0	B
Prototype development	33.4	B	28.7	B	36.7	B
Scaling-up production processes	20.3	B	20.3	B	20.3	B
Accessing critical expertise	57.1	B	57.6	B	56.7	B
Accessing new markets	45.9	B	39.5	B	50.3	B
Accessing new distribution channels	22.7	B	20.3	B	24.5	B
Other	9.3	A	11.5	B	7.7	A
Printing and Related Support Activities						
% Having Cooperative or Collaborative Arrangements	26.9	A				
Reasons for Having Arrangements						
Sharing costs	41.6	B	43.9	C	40.1	B
Spreading risk	33.2	B	36.2	C	31.2	B
Accessing research and development R&D	46.7	B	39.9	C	51.2	B
Prototype development	29.5	B	23.1	C	33.7	B
Scaling-up production processes	26.0	B	27.3	C	25.1	B
Accessing critical expertise	54.3	B	63.9	C	48.0	B
Accessing new markets	47.8	B	49.0	C	47.1	B
Accessing new distribution channels	25.1	B	11.9	B	33.7	B
Other	1.8	A	2.5	A	1.3	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.3

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, Reasons by All, Single and Multiple Location Firms

	Innovative Firms					
	All		Single Location		Multiple Location	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing						
% Having Cooperative or Collaborative Arrangements	34.1	A				
Reasons for Having Arrangements						
Sharing costs	50.0	A	75.0	A	40.0	A
Spreading risk	35.7	A	75.0	A	20.0	A
Accessing research and development R&D	64.3	A	75.0	A	60.0	A
Prototype development	21.4	A	25.0	A	20.0	A
Scaling-up production processes	21.4	A	25.0	A	20.0	A
Accessing critical expertise	64.3	A	75.0	A	60.0	A
Accessing new markets	21.4	A	50.0	A	10.0	A
Accessing new distribution channels	14.3	A	50.0	A	0.0	A
Other	7.1	A	0.0	A	10.0	A
Chemical Manufacturing (excluding 3254)						
% Having Cooperative or Collaborative Arrangements	39.3	A				
Reasons for Having Arrangements						
Sharing costs	49.3	B	47.3	B	51.2	B
Spreading risk	29.6	B	25.5	B	33.6	B
Accessing research and development R&D	68.6	B	62.9	B	74.2	B
Prototype development	31.7	B	31.7	B	31.8	B
Scaling-up production processes	23.3	B	22.7	B	23.9	B
Accessing critical expertise	54.5	B	51.6	B	57.3	B
Accessing new markets	49.6	B	46.5	B	52.6	B
Accessing new distribution channels	19.3	A	15.8	B	22.7	B
Other	6.8	A	3.0	A	10.5	B
Pharmaceutical and Medicine Manufacturing (3254)						
% Having Cooperative or Collaborative Arrangements	61.4	B				
Reasons for Having Arrangements						
Sharing costs	62.4	B	61.9	B	63.0	B
Spreading risk	55.9	B	62.7	B	47.9	B
Accessing research and development R&D	61.7	B	65.0	B	57.9	B
Prototype development	12.6	A	0.0	A	27.6	B
Scaling-up production processes	21.3	A	22.4	A	20.0	A
Accessing critical expertise	55.8	B	60.4	B	50.3	B
Accessing new markets	52.6	B	38.1	B	70.0	B
Accessing new distribution channels	12.6	A	6.3	B	20.0	A
Other	6.1	A	11.2	A	0.0	A
Plastics and Rubber Products Manufacturing						
% Having Cooperative or Collaborative Arrangements	33.4	A				
Reasons for Having Arrangements						
Sharing costs	42.6	B	47.8	B	35.7	B
Spreading risk	30.1	B	39.1	B	18.1	B
Accessing research and development R&D	54.5	B	55.2	B	53.7	B
Prototype development	53.9	B	53.5	B	54.4	B
Scaling-up production processes	34.6	B	31.8	B	38.3	B
Accessing critical expertise	57.7	B	64.2	B	49.1	B
Accessing new markets	39.0	B	36.6	B	42.3	B
Accessing new distribution channels	19.9	B	16.9	B	23.8	B
Other	4.6	A	3.5	A	6.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.3
Cooperative and Collaborative Arrangements During the Period 1997-1999
Innovators in Manufacturing
Canada, Reasons by All, Single and Multiple Location Firms

	Innovative Firms					
	All		Single Location		Multiple Location	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Non-Metallic Mineral Products Manufacturing						
% Having Cooperative or Collaborative Arrangements	32.4	A				
Reasons for Having Arrangements						
Sharing costs	38.3	B	37.0	B	39.1	B
Spreading risk	29.9	B	31.0	B	29.2	B
Accessing research and development R&D	52.0	B	42.9	B	58.3	B
Prototype development	29.8	B	18.9	B	37.2	B
Scaling-up production processes	21.5	B	15.6	B	25.5	B
Accessing critical expertise	64.3	B	65.9	B	63.2	B
Accessing new markets	48.5	B	57.7	B	42.2	B
Accessing new distribution channels	30.5	B	26.0	B	33.6	B
Other	2.7	A	0.0	A	4.5	A
Primary Metal Manufacturing						
% Having Cooperative or Collaborative Arrangements	39.0	A				
Reasons for Having Arrangements						
Sharing costs	41.7	B	44.1	B	37.0	B
Spreading risk	18.3	A	19.7	A	15.6	B
Accessing research and development R&D	54.2	B	48.8	B	64.7	B
Prototype development	45.1	B	58.8	B	18.3	B
Scaling-up production processes	22.1	B	19.3	B	27.5	B
Accessing critical expertise	52.3	B	49.1	B	58.5	B
Accessing new markets	34.9	B	36.4	B	32.0	B
Accessing new distribution channels	11.2	A	8.5	A	16.4	B
Other	5.6	A	8.5	A	0.0	A
Fabricated Metal Product Manufacturing						
% Having Cooperative or Collaborative Arrangements	30.4	A				
Reasons for Having Arrangements						
Sharing costs	42.8	B	39.8	B	47.5	B
Spreading risk	26.8	B	29.8	B	22.1	B
Accessing research and development R&D	44.8	B	42.9	B	47.8	B
Prototype development	55.4	B	55.9	B	54.6	B
Scaling-up production processes	30.9	B	28.9	B	34.0	B
Accessing critical expertise	47.4	B	52.2	B	39.9	B
Accessing new markets	44.7	B	50.8	B	35.2	B
Accessing new distribution channels	21.7	B	23.1	B	19.5	B
Other	9.7	B	7.9	B	12.5	B
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)						
% Having Cooperative or Collaborative Arrangements	40.0	A				
Reasons for Having Arrangements						
Sharing costs	41.7	B	52.9	B	21.4	B
Spreading risk	40.9	B	38.4	B	45.3	B
Accessing research and development R&D	38.9	B	37.8	B	40.8	B
Prototype development	52.3	B	55.2	B	47.1	B
Scaling-up production processes	7.2	A	6.7	A	8.0	A
Accessing critical expertise	45.0	B	47.5	B	40.6	B
Accessing new markets	46.6	B	40.8	B	57.2	B
Accessing new distribution channels	29.1	B	19.4	B	46.6	B
Other	0.0	A	0.0	A	0.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.3

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, Reasons by All, Single and Multiple Location Firms

	Innovative Firms					
	All		Single Location		Multiple Location	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)						
% Having Cooperative or Collaborative Arrangements	38.7	B				
Reasons for Having Arrangements						
Sharing costs	43.1	B	42.3	B	44.6	B
Spreading risk	29.1	B	19.3	B	47.5	B
Accessing research and development R&D	46.9	B	39.4	B	61.1	B
Prototype development	62.8	B	62.4	B	63.6	B
Scaling-up production processes	14.5	B	8.8	B	25.3	B
Accessing critical expertise	57.0	B	57.4	B	56.1	B
Accessing new markets	38.2	B	32.0	B	49.8	B
Accessing new distribution channels	25.9	B	26.1	B	25.6	B
Other	3.7	A	2.1	A	6.8	A
Computer and Peripheral Equipment Manufacturing						
% Having Cooperative or Collaborative Arrangements	53.1	B				
Reasons for Having Arrangements						
Sharing costs	48.9	B	52.9	B	44.9	B
Spreading risk	40.1	B	26.5	B	53.6	C
Accessing research and development R&D	72.3	B	63.2	B	81.2	B
Prototype development	54.0	B	63.2	B	44.9	B
Scaling-up production processes	22.6	B	26.5	B	18.8	B
Accessing critical expertise	62.8	B	63.2	B	62.3	C
Accessing new markets	64.2	B	55.9	B	72.5	B
Accessing new distribution channels	41.6	B	47.1	B	36.2	B
Other	4.4	A	8.8	A	0.0	A
Communications Equipment Manufacturing						
% Having Cooperative or Collaborative Arrangements	46.9	B				
Reasons for Having Arrangements						
Sharing costs	60.9	B	62.8	C	58.8	B
Spreading risk	36.7	B	54.4	C	16.0	B
Accessing research and development R&D	45.0	B	47.7	B	41.8	B
Prototype development	46.8	B	59.5	B	32.0	B
Scaling-up production processes	29.1	B	30.9	B	26.8	B
Accessing critical expertise	47.8	B	46.4	B	49.5	B
Accessing new markets	58.4	B	56.8	C	60.4	B
Accessing new distribution channels	57.7	B	56.0	B	59.7	B
Other	8.1	A	8.4	B	7.7	A
Audio and Video Equipment Manufacturing						
% Having Cooperative or Collaborative Arrangements	x	A				
Reasons for Having Arrangements						
Sharing costs	x	A	x	A	-	-
Spreading risk	x	A	x	A	-	-
Accessing research and development R&D	x	A	x	A	-	-
Prototype development	x	A	x	A	-	-
Scaling-up production processes	x	A	x	A	-	-
Accessing critical expertise	x	A	x	A	-	-
Accessing new markets	x	A	x	A	-	-
Accessing new distribution channels	x	A	x	A	-	-
Other	x	A	x	A	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.3
Cooperative and Collaborative Arrangements During the Period 1997-1999
Innovators in Manufacturing
Canada, Reasons by All, Single and Multiple Location Firms

	Innovative Firms					
	All		Single Location		Multiple Location	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing						
% Having Cooperative or Collaborative Arrangements	56.5	B				
Reasons for Having Arrangements						
Sharing costs	41.0	B	21.0	B	52.9	B
Spreading risk	16.0	B	10.8	A	19.0	B
Accessing research and development R&D	70.7	B	63.7	B	74.9	B
Prototype development	54.8	B	67.5	B	47.1	B
Scaling-up production processes	29.3	B	21.7	B	33.8	B
Accessing critical expertise	62.9	B	68.2	B	59.7	B
Accessing new markets	38.6	B	57.3	B	27.4	B
Accessing new distribution channels	8.1	A	10.8	A	6.5	A
Other	4.0	A	0.0	A	6.5	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media						
% Having Cooperative or Collaborative Arrangements	50.1	B				
Reasons for Having Arrangements						
Sharing costs	46.3	B	32.1	B	62.8	B
Spreading risk	39.6	B	24.6	B	57.2	B
Accessing research and development R&D	55.5	B	42.7	B	70.4	B
Prototype development	39.7	B	39.5	B	40.0	B
Scaling-up production processes	5.6	A	4.1	A	7.4	A
Accessing critical expertise	52.1	B	42.0	B	63.8	B
Accessing new markets	56.9	B	36.8	B	80.3	B
Accessing new distribution channels	26.3	B	33.1	B	18.5	B
Other	3.7	A	3.4	A	4.0	B
Electrical Equipment, Appliance and Component Manufacturing						
% Having Cooperative or Collaborative Arrangements	44.1	A				
Reasons for Having Arrangements						
Sharing costs	31.4	B	34.5	B	27.2	B
Spreading risk	18.0	B	18.6	B	17.2	B
Accessing research and development R&D	58.2	B	69.6	B	43.2	B
Prototype development	54.7	B	60.7	B	46.8	B
Scaling-up production processes	22.6	B	22.5	B	22.7	B
Accessing critical expertise	65.4	B	70.3	B	59.0	B
Accessing new markets	51.9	B	52.7	B	50.9	B
Accessing new distribution channels	29.8	B	36.8	B	20.7	B
Other	8.9	A	4.2	A	15.1	B
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing						
% Having Cooperative or Collaborative Arrangements	38.0	B				
Reasons for Having Arrangements						
Sharing costs	48.5	B	36.9	B	71.1	B
Spreading risk	22.1	B	13.1	B	39.6	C
Accessing research and development R&D	49.9	B	49.4	B	51.0	C
Prototype development	66.5	B	62.7	B	74.0	C
Scaling-up production processes	30.4	B	13.8	B	62.7	C
Accessing critical expertise	42.8	B	41.5	B	45.2	C
Accessing new markets	38.0	B	41.3	B	31.5	C
Accessing new distribution channels	19.1	B	14.3	B	28.3	C
Other	0.0	A	0.0	A	0.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.3

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, Reasons by All, Single and Multiple Location Firms

	Innovative Firms					
	All		Single Location		Multiple Location	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Aerospace Product and Parts Manufacturing						
% Having Cooperative or Collaborative Arrangements	50.9	B				
Reasons for Having Arrangements						
Sharing costs	63.4	B	68.4	C	61.1	B
Spreading risk	48.6	B	44.6	C	50.6	B
Accessing research and development R&D	47.1	B	46.1	C	47.5	B
Prototype development	62.4	B	56.4	C	65.2	B
Scaling-up production processes	18.0	B	0.0	A	26.6	B
Accessing critical expertise	55.2	B	35.9	C	64.4	B
Accessing new markets	63.8	B	43.6	C	73.4	B
Accessing new distribution channels	3.3	A	0.0	A	4.9	A
Other	7.2	B	12.0	C	4.9	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment						
% Having Cooperative or Collaborative Arrangements	41.7	B				
Reasons for Having Arrangements						
Sharing costs	42.4	C	25.6	B	62.2	C
Spreading risk	31.8	B	7.7	B	60.4	C
Accessing research and development R&D	46.8	C	52.9	C	39.6	C
Prototype development	51.3	C	60.1	C	40.8	C
Scaling-up production processes	17.5	B	24.6	C	9.1	A
Accessing critical expertise	36.5	C	42.6	C	29.2	C
Accessing new markets	31.5	C	24.6	C	39.6	C
Accessing new distribution channels	8.3	A	7.7	A	9.1	B
Other	11.1	B	20.4	C	0.0	A
Furniture and Related Products Manufacturing						
% Having Cooperative or Collaborative Arrangements	20.3	A				
Reasons for Having Arrangements						
Sharing costs	31.3	B	26.8	B	38.3	C
Spreading risk	18.3	B	14.9	B	23.5	C
Accessing research and development R&D	54.7	B	49.1	B	63.6	C
Prototype development	47.3	B	44.3	B	51.9	C
Scaling-up production processes	24.0	B	20.9	B	28.8	C
Accessing critical expertise	68.7	B	61.4	B	80.3	B
Accessing new markets	36.2	B	22.2	B	58.1	C
Accessing new distribution channels	38.0	B	32.8	B	46.2	C
Other	3.6	A	3.2	B	4.3	B
Miscellaneous Manufacturing						
% Having Cooperative or Collaborative Arrangements	34.3	B				
Reasons for Having Arrangements						
Sharing costs	32.7	B	28.9	B	36.1	B
Spreading risk	7.6	B	3.2	B	11.6	B
Accessing research and development R&D	50.0	B	27.6	B	70.6	C
Prototype development	64.2	B	68.8	B	60.0	C
Scaling-up production processes	20.8	B	23.0	B	18.8	B
Accessing critical expertise	70.0	B	65.2	B	74.5	B
Accessing new markets	29.6	B	27.5	B	31.6	C
Accessing new distribution channels	25.1	B	26.8	B	23.6	B
Other	7.5	B	8.1	B	6.9	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.1

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, All Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries												
% Having cooperative or collaborative arrangements	33.0	A	87.7	A	64.8	A	33.4	A	16.7	A	8.8	A
Cooperators/Collaborators:												
Competitors	35.3	A	67.0	A	51.8	A	28.2	A	12.0	A	6.2	A
Clients	64.9	A	78.7	A	60.8	A	22.2	A	14.5	A	8.4	A
Consulting firms	39.3	A	83.8	A	33.5	A	12.7	A	4.2	A	2.5	A
Suppliers	71.4	A	81.7	A	58.1	A	23.4	A	9.1	A	3.1	A
Federal government research institutes	21.0	A	95.2	A	8.8	A	2.9	A	0.4	A	3.1	A
Provincial government institutes	16.3	A	93.7	A	7.9	A	1.4	A	0.3	A	3.8	A
Other firms within your corporate group	22.5	A	70.9	A	54.1	A	30.1	A	10.9	A	5.2	A
Universities	23.7	A	89.6	A	18.4	A	6.5	A	1.7	A	2.3	A
Other	5.8	A	63.8	B	33.9	B	18.6	A	4.7	A	3.5	B
Food Manufacturing												
% Having cooperative or collaborative arrangements	32.1	A	92.2	A	66.6	B	27.9	B	16.6	B	7.3	A
Cooperators/Collaborators:												
Competitors	44.3	B	74.7	B	42.9	B	13.8	A	0.0	A	5.4	A
Clients	66.7	B	78.6	B	40.5	B	17.2	B	15.7	B	5.6	A
Consulting firms	49.4	B	80.6	B	23.5	B	12.9	B	0.0	A	2.5	A
Suppliers	77.5	B	87.6	A	56.5	B	18.2	B	3.1	A	3.4	A
Federal government research institutes	27.7	A	97.4	A	8.1	B	5.5	B	1.8	A	0.0	A
Provincial government institutes	21.2	A	92.3	A	7.7	A	0.0	A	0.0	A	0.0	A
Other firms within your corporate group	35.7	B	73.6	B	46.3	B	29.3	B	15.8	B	0.0	A
Universities	24.6	B	95.8	B	25.0	B	2.0	A	2.0	A	2.0	A
Other	3.5	A	x	C	x	B	x	B	x	A	x	A
Beverage and Tobacco Product Manufacturing												
% Having cooperative or collaborative arrangements	49.7	A	94.2	A	68.5	B	38.5	B	27.1	B	12.2	B
Cooperators/Collaborators:												
Competitors	52.3	B	88.5	B	34.3	B	11.3	B	0.0	A	5.7	B
Clients	59.5	B	89.7	B	52.2	B	4.9	A	10.3	B	0.0	A
Consulting firms	71.6	B	96.1	A	67.3	B	7.9	A	0.0	A	0.0	A
Suppliers	91.5	A	100.0	A	65.6	B	25.7	B	12.8	A	0.0	A
Federal government research institutes	14.5	A	x	B	x	C	x	A	x	A	x	B
Provincial government institutes	14.9	A	x	B	x	A	x	A	x	A	x	B
Other firms within your corporate group	43.0	B	72.1	B	64.5	B	6.9	B	0.0	A	14.7	B
Universities	33.4	B	100.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Other	12.0	A	x	A	x	A	x	A	x	B	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.1

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, All Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Textile Mills												
% Having cooperative or collaborative arrangements	32.0	A	85.7	B	58.7	B	42.4	B	6.7	A	9.1	B
Cooperators/Collaborators:												
Competitors	26.6	B	72.1	C	56.4	C	37.0	C	0.0	A	9.1	B
Clients	54.1	B	95.9	A	65.1	B	9.6	B	0.0	A	0.0	A
Consulting firms	34.4	B	80.4	B	13.0	B	13.0	B	0.0	A	6.5	B
Suppliers	67.3	B	71.8	B	48.8	B	49.4	B	6.7	A	3.3	A
Federal government research institutes	18.1	B	100.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Provincial government institutes	9.0	A	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	11.3	B	x	C	x	C	x	C	x	C	x	C
Universities	9.1	A	x	A	x	A	x	A	x	A	x	A
Other	4.5	A	x	D	x	D	x	D	x	A	x	A
Textile Product Mills												
% Having cooperative or collaborative arrangements	36.4	B	80.4	B	85.3	B	29.2	B	12.2	B	9.6	B
Cooperators/Collaborators:												
Competitors	30.9	B	68.9	C	100.0	A	14.5	C	0.0	A	8.3	C
Clients	50.9	B	84.2	B	100.0	A	32.2	C	8.8	B	13.9	B
Consulting firms	29.5	B	91.3	C	32.0	C	0.0	A	0.0	A	8.7	C
Suppliers	78.0	B	71.3	B	89.9	B	31.0	B	9.8	B	0.0	A
Federal government research institutes	20.1	B	87.2	C	13.7	C	0.0	A	0.0	A	12.8	C
Provincial government institutes	10.2	B	x	D	x	A	x	A	x	A	x	D
Other firms within your corporate group	15.4	B	x	D	x	C	x	C	x	A	x	A
Universities	10.6	B	x	D	x	A	x	A	x	A	x	D
Other	16.2	B	x	C	x	C	x	C	x	C	x	C
Clothing Manufacturing												
% Having cooperative or collaborative arrangements	15.9	A	91.2	B	62.7	B	36.2	B	21.9	B	7.8	B
Cooperators/Collaborators:												
Competitors	41.1	B	95.8	A	32.6	B	5.2	B	5.2	B	4.2	A
Clients	75.9	B	85.6	B	56.8	B	17.9	B	5.6	B	2.8	A
Consulting firms	49.0	B	96.5	A	4.3	B	0.0	A	0.0	A	3.5	A
Suppliers	75.9	B	76.6	B	65.3	B	35.8	B	19.7	B	5.6	B
Federal government research institutes	12.6	B	x	B	x	A	x	A	x	A	x	B
Provincial government institutes	19.6	B	91.1	A	0.0	A	0.0	A	0.0	A	8.9	A
Other firms within your corporate group	17.5	B	x	C	x	C	x	C	x	C	x	C
Universities	19.5	B	90.7	C	46.5	C	35.6	C	35.6	C	9.3	C
Other	1.8	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.1

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, All Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Leather and Allied Product Manufacturing												
% Having cooperative or collaborative arrangements	36.3	B	86.0	B	85.1	B	28.1	B	33.1	B	0.0	A
Cooperators/Collaborators:												
Competitors	19.0	B	x	C	x	A	x	C	x	C	x	A
Clients	66.9	B	71.6	C	50.6	C	14.8	B	14.8	B	0.0	A
Consulting firms	28.1	B	x	A	x	C	x	C	x	C	x	A
Suppliers	95.0	B	80.0	B	79.1	B	29.6	B	29.6	B	0.0	A
Federal government research institutes	5.0	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	18.2	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	32.2	B	x	C	x	C	x	A	x	A	x	A
Universities	14.9	B	x	A	x	A	x	A	x	A	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Sawmills and Wood Preservation												
% Having cooperative or collaborative arrangements	22.1	A	97.7	A	33.3	B	15.2	B	9.3	B	2.3	A
Cooperators/Collaborators:												
Competitors	38.3	B	94.0	B	39.3	B	11.9	B	6.0	B	0.0	A
Clients	36.0	B	90.3	B	44.5	B	0.0	A	19.5	B	6.3	A
Consulting firms	43.9	B	92.0	B	8.0	B	0.0	A	0.0	A	0.0	A
Suppliers	54.1	B	95.6	B	27.4	B	14.7	B	0.0	A	4.2	A
Federal government research institutes	11.9	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	13.5	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	4.5	A	x	A	x	A	x	A	x	A	x	A
Universities	8.0	A	x	A	x	A	x	A	x	A	x	A
Other	24.7	B	90.7	B	0.0	A	20.2	B	0.0	A	0.0	A
Veneer, Plywood and Engineered Wood Product Manufacturing												
% Having cooperative or collaborative arrangements	40.2	B	89.9	B	50.9	B	17.1	B	15.1	B	0.0	A
Cooperators/Collaborators:												
Competitors	42.1	B	90.1	B	45.0	B	8.5	B	0.0	A	0.0	A
Clients	41.3	B	89.9	B	53.5	B	16.3	B	36.6	C	0.0	A
Consulting firms	48.2	B	91.3	B	47.6	B	0.0	A	0.0	A	0.0	A
Suppliers	62.1	B	83.7	B	58.5	B	5.7	B	0.0	A	0.0	A
Federal government research institutes	36.6	B	100.0	A	11.4	B	0.0	A	0.0	A	0.0	A
Provincial government institutes	33.3	B	100.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Other firms within your corporate group	23.1	B	x	C	x	C	x	A	x	A	x	A
Universities	31.1	B	78.3	B	11.5	B	21.7	B	0.0	A	0.0	A
Other	14.6	B	x	A	x	C	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.1

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, All Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Other Wood Product Manufacturing												
% Having cooperative or collaborative arrangements	18.0	A	97.0	B	42.2	B	2.6	A	9.7	B	3.0	B
Cooperators/Collaborators:												
Competitors	36.7	B	75.7	C	34.5	C	0.0	A	8.8	B	0.0	A
Clients	61.7	B	96.0	B	34.4	B	4.2	B	15.8	B	4.9	B
Consulting firms	33.9	B	100.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Suppliers	70.0	B	100.0	A	18.3	B	0.0	A	0.0	A	0.0	A
Federal government research institutes	18.7	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	9.3	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	8.1	B	x	D	x	D	x	A	x	A	x	A
Universities	27.2	B	100.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Paper Manufacturing												
% Having cooperative or collaborative arrangements	39.0	A	89.5	A	74.4	A	39.2	B	4.2	A	10.5	A
Cooperators/Collaborators:												
Competitors	24.8	A	55.4	B	55.4	B	44.6	B	9.7	A	9.4	A
Clients	64.0	B	89.7	A	65.7	B	8.5	A	2.8	A	10.9	A
Consulting firms	57.2	B	86.5	A	33.5	B	17.7	B	0.0	A	2.0	A
Suppliers	87.7	A	80.0	A	69.3	B	30.2	B	1.5	A	3.4	A
Federal government research institutes	14.3	A	83.6	B	0.0	A	0.0	A	0.0	A	16.4	B
Provincial government institutes	9.3	A	62.5	B	12.5	B	0.0	A	0.0	A	25.0	B
Other firms within your corporate group	35.8	B	73.1	B	53.5	B	28.4	B	0.0	A	5.0	B
Universities	28.9	A	81.3	B	18.7	B	0.0	A	0.0	A	8.1	A
Other	9.5	A	74.2	B	44.7	C	0.0	A	0.0	A	0.0	A
Printing and Related Support Activities												
% Having cooperative or collaborative arrangements	26.9	A	89.7	B	70.5	B	23.7	B	5.9	A	4.2	A
Cooperators/Collaborators:												
Competitors	30.8	B	71.5	C	46.2	C	2.5	B	6.2	B	0.0	A
Clients	70.6	B	90.4	B	53.2	B	17.6	B	2.7	A	5.9	B
Consulting firms	13.4	B	...	D	...	D	11.6	C	0.0	A	0.0	A
Suppliers	82.6	B	78.9	B	59.6	B	17.2	B	4.4	A	0.0	A
Federal government research institutes	4.4	A	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	3.1	A	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	23.5	B	77.5	C	44.7	C	25.5	C	0.0	A	0.0	A
Universities	7.1	B	x	A	x	A	x	A	x	A	x	A
Other	1.8	A	x	D	x	D	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.1

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, All Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing												
% Having cooperative or collaborative arrangements	**34.1**	**A**	**100.0**	**A**	**57.1**	**A**	**35.7**	**A**	**28.6**	**A**	**0.0**	**A**
Cooperators/Collaborators:												
Competitors	50.0	A	85.7	A	42.9	A	0.0	A	14.3	A	0.0	A
Clients	42.9	A	x	A	x	A	x	A	x	A	x	A
Consulting firms	57.1	A	87.5	A	37.5	A	25.0	A	0.0	A	0.0	A
Suppliers	92.9	A	92.3	A	46.2	A	23.1	A	23.1	A	0.0	A
Federal government research institutes	21.4	A	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	35.7	A	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	42.9	A	x	A	x	A	x	A	x	A	x	A
Universities	35.7	A	x	A	x	A	x	A	x	A	x	A
Other	7.1	A	x	A	x	A	x	A	x	A	x	A
Chemical Manufacturing (excluding 3254)												
% Having cooperative or collaborative arrangements	**39.3**	**A**	**86.9**	**A**	**75.4**	**A**	**41.9**	**B**	**18.3**	**A**	**8.8**	**A**
Cooperators/Collaborators:												
Competitors	40.4	B	65.6	B	55.3	B	26.0	B	21.5	B	5.3	A
Clients	69.4	B	80.1	B	67.4	B	32.1	B	17.5	B	6.8	A
Consulting firms	39.9	B	81.8	B	39.0	B	21.4	B	0.0	A	0.0	A
Suppliers	61.5	B	75.0	B	75.2	B	26.1	B	9.9	A	4.4	A
Federal government research institutes	30.3	B	91.5	B	12.8	B	4.3	B	0.0	A	0.0	A
Provincial government institutes	24.8	A	94.8	B	15.6	B	5.2	B	0.0	A	0.0	A
Other firms within your corporate group	30.5	B	40.1	B	82.5	B	46.7	B	11.3	B	9.0	B
Universities	35.6	B	75.8	B	37.9	B	22.6	B	0.0	A	0.0	A
Other	9.9	A	50.5	C	45.0	C	30.7	C	0.0	A	0.0	A
Pharmaceutical and Medicine Manufacturing (3254)												
% Having cooperative or collaborative arrangements	**61.4**	**B**	**93.5**	**A**	**72.4**	**B**	**52.9**	**B**	**23.4**	**B**	**24.7**	**A**
Cooperators/Collaborators:												
Competitors	57.9	B	64.9	B	41.1	B	35.8	B	10.5	A	15.8	A
Clients	56.6	B	88.5	B	69.5	B	30.5	B	24.4	B	22.2	B
Consulting firms	64.9	B	74.2	B	35.2	B	9.4	A	4.7	A	9.4	A
Suppliers	61.2	B	77.6	B	58.5	B	40.4	B	20.5	B	5.0	A
Federal government research institutes	15.6	A	x	A	x	A	x	A	x	A	x	B
Provincial government institutes	6.5	A	x	A	x	C	x	C	x	C	x	C
Other firms within your corporate group	42.5	B	48.4	B	85.7	A	63.3	B	14.3	A	28.6	B
Universities	45.7	B	93.3	A	27.5	B	13.3	A	6.7	A	13.3	A
Other	3.4	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.1

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, All Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Plastics and Rubber Products Manufacturing												
% Having cooperative or collaborative arrangements	33.4	A	82.7	B	68.3	B	25.4	B	14.2	A	14.7	A
Cooperators/Collaborators:												
Competitors	27.4	B	46.3	B	77.3	B	29.3	B	16.0	B	20.4	B
Clients	63.2	B	73.1	B	67.2	B	12.8	B	9.0	A	20.1	B
Consulting firms	30.0	B	79.6	B	45.9	B	15.4	B	3.4	B	9.4	B
Suppliers	75.9	B	80.2	B	60.2	B	20.2	B	4.8	A	5.9	A
Federal government research institutes	22.3	A	100.0	A	6.0	B	0.0	A	0.0	A	0.0	A
Provincial government institutes	11.0	A	94.2	A	18.1	C	0.0	A	0.0	A	0.0	A
Other firms within your corporate group	25.4	B	64.2	B	44.3	B	20.0	B	16.3	B	5.3	B
Universities	18.8	A	82.4	B	33.6	B	0.0	A	0.0	A	3.6	A
Other	5.3	A	x	C	x	C	x	A	x	A	x	A
Non-Metallic Mineral Products Manufacturing												
% Having cooperative or collaborative arrangements	32.4	A	88.2	B	61.6	B	27.1	B	9.2	B	8.7	A
Cooperators/Collaborators:												
Competitors	46.1	B	65.8	B	[illegible]	B	8.8	B	0.0	A	13.6	B
Clients	56.2	B	92.6	B	54.5	B	24.1	B	16.4	B	5.3	B
Consulting firms	48.8	B	81.1	B	21.0	B	11.5	B	0.0	A	6.1	B
Suppliers	65.7	B	90.4	B	50.8	B	18.4	B	1.8	A	2.7	A
Federal government research institutes	24.7	B	92.9	B	6.6	B	0.0	A	0.0	A	7.1	B
Provincial government institutes	18.1	B	75.9	C	48.4	C	9.0	B	0.0	A	9.6	C
Other firms within your corporate group	27.9	B	67.1	C	40.0	C	22.1	C	0.0	A	6.3	B
Universities	27.0	B	93.5	B	0.0	A	0.0	A	0.0	A	6.5	B
Other	6.2	A	x	D	x	C	x	D	x	A	x	A
Primary Metal Manufacturing												
% Having cooperative or collaborative arrangements	39.0	A	85.7	A	71.4	B	39.5	B	19.9	A	9.5	A
Cooperators/Collaborators:												
Competitors	44.1	B	59.1	B	60.8	B	41.4	B	27.3	B	7.3	A
Clients	70.7	A	64.6	B	73.9	B	29.8	B	11.1	B	2.3	A
Consulting firms	49.0	B	75.9	B	32.6	B	21.0	B	3.3	A	0.0	A
Suppliers	74.1	A	75.3	B	69.2	B	17.2	B	9.7	A	4.3	A
Federal government research institutes	35.0	B	100.0	A	29.1	B	4.6	A	0.0	A	0.0	A
Provincial government institutes	25.5	B	100.0	A	6.3	A	0.0	A	0.0	A	0.0	A
Other firms within your corporate group	20.2	B	73.1	B	57.1	C	37.7	C	0.0	A	15.4	B
Universities	31.8	B	100.0	A	15.3	B	7.3	B	5.1	A	0.0	A
Other	7.2	A	x	C	x	A	x	C	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.1

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, All Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing												
% Having cooperative or collaborative arrangements	30.4	A	88.7	B	55.4	B	18.9	B	11.9	B	6.0	A
Cooperators/Collaborators:												
Competitors	31.7	B	71.5	B	33.6	B	30.4	B	5.0	B	0.0	A
Clients	65.6	B	85.0	B	51.5	B	10.3	B	11.7	B	7.5	B
Consulting firms	31.8	B	93.1	B	33.4	C	3.5	B	0.0	A	0.0	A
Suppliers	65.2	B	82.0	B	44.8	B	12.2	B	5.8	B	3.3	A
Federal government research institutes	22.7	B	100.0	A	5.6	A	0.0	A	0.0	A	0.0	A
Provincial government institutes	15.7	B	100.0	A	8.0	B	0.0	A	0.0	A	0.0	A
Other firms within your corporate group	10.2	A	77.1	C	28.1	C	18.4	C	18.4	C	0.0	A
Universities	20.1	B	100.0	A	2.3	A	0.0	A	0.0	A	0.0	A
Other	3.8	A	x	D	x	D	x	C	x	A	x	D
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)												
% Having cooperative or collaborative arrangements	40.0	A	94.6	A	64.0	B	30.1	B	21.4	B	19.2	A
Cooperators/Collaborators:												
Competitors	29.9	B	72.8	B	66.6	B	40.5	B	13.3	B	4.3	A
Clients	74.4	B	78.7	B	77.5	B	33.3	B	28.8	B	18.1	B
Consulting firms	41.5	B	78.3	B	25.2	B	12.5	B	0.0	A	0.0	A
Suppliers	56.2	B	88.0	B	66.7	B	26.3	B	7.2	A	7.6	A
Federal government research institutes	25.0	B	88.1	B	0.0	A	0.0	A	0.0	A	11.9	B
Provincial government institutes	18.4	A	83.8	B	0.0	A	0.0	A	0.0	A	16.2	B
Other firms within your corporate group	10.7	A	100.0	A	37.8	C	0.0	A	0.0	A	0.0	A
Universities	31.7	B	91.9	B	0.0	A	13.0	B	0.0	A	4.0	A
Other	5.2	A	x	A	x	A	x	A	x	A	x	A
Machinery Manufacturing (excluding 3331 & 3332)												
% Having cooperative or collaborative arrangements	38.7	B	83.8	B	56.8	B	36.0	B	10.4	B	8.9	A
Cooperators/Collaborators:												
Competitors	34.6	B	56.5	C	45.4	C	31.7	B	9.1	B	10.0	B
Clients	66.2	B	65.1	B	55.2	B	23.1	B	13.0	B	6.6	B
Consulting firms	37.0	B	71.2	B	33.3	B	20.7	B	9.7	B	2.9	A
Suppliers	67.6	B	74.8	B	44.7	B	29.5	B	2.5	A	2.5	A
Federal government research institutes	11.6	A	90.2	B	0.0	A	0.0	A	0.0	A	9.8	B
Provincial government institutes	9.5	A	88.1	B	0.0	A	0.0	A	0.0	A	11.9	B
Other firms within your corporate group	17.8	B	90.0	B	50.7	C	18.0	C	0.0	A	0.0	A
Universities	18.1	B	84.2	B	16.8	C	0.0	A	3.5	A	6.2	A
Other	4.1	A	x	D	x	A	x	C	x	C	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.1

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, All Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Computer and Peripheral Equipment Manufacturing												
% Having cooperative or collaborative arrangements	53.1	B	91.2	A	86.1	B	53.3	B	73.0	B	0.0	A
Cooperators/Collaborators:												
Competitors	45.3	B	48.4	B	88.7	C	19.4	A	40.3	B	0.0	A
Clients	77.4	B	58.5	B	87.7	B	46.2	B	34.9	B	0.0	A
Consulting firms	50.4	B	72.5	B	55.1	B	27.5	B	10.1	C	0.0	A
Suppliers	95.6	A	76.3	B	71.0	B	37.4	B	56.5	B	0.0	A
Federal government research institutes	23.4	B	x	C	x	B	x	B	x	A	x	A
Provincial government institutes	14.6	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	32.1	B	56.8	C	84.1	C	43.2	C	29.5	C	0.0	A
Universities	23.4	B	x	A	x	B	x	C	x	B	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Communications Equipment Manufacturing												
% Having cooperative or collaborative arrangements	46.9	B	80.3	B	85.9	A	33.2	B	29.7	B	7.3	A
Cooperators/Collaborators:												
Competitors	34.6	B	76.7	B	47.4	B	20.4	B	10.2	A	0.0	A
Clients	77.2	B	69.9	B	95.4	A	31.2	B	22.1	B	4.6	A
Consulting firms	28.6	B	100.0	A	25.7	B	12.3	A	0.0	A	0.0	A
Suppliers	38.8	B	90.1	B	69.3	B	11.7	B	11.7	B	0.0	A
Federal government research institutes	16.0	B	x	C	x	A	x	A	x	A	x	C
Provincial government institutes	12.2	B	x	C	x	A	x	A	x	A	x	C
Other firms within your corporate group	11.9	B	x	C	x	A	x	C	x	C	x	A
Universities	33.1	B	100.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Audio and Video Equipment Manufacturing												
% Having cooperative or collaborative arrangements	x	A	x	A	x	A	x	A	x	A	x	A
Cooperators/Collaborators:												
Competitors	x	A	x	A	x	A	x	A	x	A	x	A
Clients	x	A	x	A	x	A	x	A	x	A	x	A
Consulting firms	x	A	x	A	x	A	x	A	x	A	x	A
Suppliers	x	A	x	A	x	A	x	A	x	A	x	A
Federal government research institutes	x	A	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	x	A	-	-	-	-	-	-	-	-	-	-
Other firms within your corporate group	x	A	-	-	-	-	-	-	-	-	-	-
Universities	x	A	-	-	-	-	-	-	-	-	-	-
Other	x	A	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.1

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, All Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing												
% Having cooperative or collaborative arrangements	56.5	B	96.2	A	87.9	A	76.2	B	46.7	B	11.9	B
Cooperators/Collaborators:												
Competitors	27.6	B	43.1	B	85.3	B	57.8	B	28.4	C	0.0	A
Clients	87.9	A	77.5	B	95.4	A	37.9	B	53.1	B	8.9	B
Consulting firms	39.0	B	68.9	B	31.1	B	0.0	A	0.0	A	0.0	A
Suppliers	70.7	B	83.2	B	88.6	A	49.2	B	54.9	B	0.0	A
Federal government research institutes	23.3	B	x	A	x	C	x	A	x	A	x	A
Provincial government institutes	34.8	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	46.7	B	65.8	B	34.2	B	42.9	B	8.7	A	8.7	A
Universities	68.3	B	100.0	A	11.5	B	5.9	A	0.0	A	0.0	A
Other	17.6	B	x	A	x	A	x	A	x	A	x	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media												
% Having cooperative or collaborative arrangements	50.1	B	92.1	A	74.6	B	63.0	B	41.6	B	18.7	B
Cooperators/Collaborators:												
Competitors	34.2	B	43.7	B	72.1	B	71.1	B	47.3	B	5.4	A
Clients	81.2	B	65.2	B	71.6	B	43.7	B	36.9	B	16.3	B
Consulting firms	35.7	B	89.3	A	35.9	B	10.2	A	0.0	A	0.0	A
Suppliers	60.6	B	93.8	A	85.0	B	41.1	B	22.4	B	3.1	B
Federal government research institutes	44.0	B	96.0	A	11.8	A	11.8	A	0.0	A	4.0	A
Provincial government institutes	14.9	B	x	B	x	A	x	A	x	A	x	B
Other firms within your corporate group	23.4	B	67.5	C	70.6	B	40.1	B	0.0	A	0.0	A
Universities	34.4	B	94.6	B	22.3	C	5.4	B	0.0	A	0.0	A
Other	9.2	A	x	C	x	B	x	B	x	A	x	A
Electrical Equipment, Appliance and Component Manufacturing												
% Having cooperative or collaborative arrangements	44.1	A	87.3	A	89.3	A	57.7	B	28.8	B	11.5	A
Cooperators/Collaborators:												
Competitors	34.1	B	61.0	B	89.5	A	69.8	B	40.8	B	5.2	B
Clients	67.7	B	77.2	B	90.4	A	36.0	B	26.3	B	11.0	B
Consulting firms	39.6	B	61.2	B	58.5	B	19.3	B	9.0	B	10.3	B
Suppliers	70.3	B	75.6	B	79.0	B	32.4	B	20.0	B	5.8	B
Federal government research institutes	29.0	B	95.2	A	6.2	B	4.8	A	0.0	A	0.0	A
Provincial government institutes	29.7	B	100.0	A	7.7	B	0.0	A	0.0	A	0.0	A
Other firms within your corporate group	18.2	B	54.1	C	73.8	C	77.0	C	6.6	B	0.0	A
Universities	36.7	B	67.3	B	40.8	B	13.0	B	0.0	A	0.0	A
Other	5.4	A	x	D	x	C	x	C	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.1

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, All Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	**Reliability**	**Percent**	**Reliability**	**Percent**	**Reliability**	**Percent**	**Reliability**	**Percent**	**Reliability**	**Percent**	**Reliability**
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing												
% Having cooperative or collaborative arrangements	38.0	B	76.3	B	66.7	B	34.2	B	11.0	B	8.0	B
Cooperators/Collaborators:												
Competitors	22.5	B	44.0	C	59.5	C	39.0	C	8.6	B	8.4	B
Clients	68.1	B	74.0	B	59.4	B	21.7	B	3.3	A	7.2	B
Consulting firms	27.6	B	91.9	B	58.9	C	6.9	B	10.7	B	4.0	B
Suppliers	73.2	B	78.4	B	62.6	B	9.4	B	2.6	A	2.6	A
Federal government research institutes	28.6	B	100.0	A	14.1	B	0.0	A	0.0	A	0.0	A
Provincial government institutes	13.7	B	100.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Other firms within your corporate group	11.5	B	x	A	x	A	x	C	x	C	x	C
Universities	28.8	B	89.4	B	24.0	C	0.0	A	0.0	A	0.0	A
Other	3.0	A	x	D	x	D	x	A	x	A	x	A
Aerospace Product and Parts Manufacturing												
% Having cooperative or collaborative arrangements	50.9	B	84.6	B	85.1	B	65.3	B	15.8	B	3.9	B
Cooperators/Collaborators:												
Competitors	60.6	B	45.8	B	62.8	B	48.1	B	6.3	B	0.0	A
Clients	75.9	B	57.3	B	76.1	B	43.4	B	6.3	B	5.1	B
Consulting firms	30.0	B	76.3	B	62.0	C	12.7	B	0.0	A	0.0	A
Suppliers	66.0	B	78.5	B	90.0	A	25.9	B	10.9	B	0.0	A
Federal government research institutes	24.4	B	x	C	x	C	x	C	x	A	x	A
Provincial government institutes	20.5	B	x	C	x	C	x	B	x	A	x	A
Other firms within your corporate group	33.8	B	69.2	B	55.0	C	21.0	B	0.0	A	0.0	A
Universities	30.9	B	77.0	B	23.0	B	0.0	A	0.0	A	0.0	A
Other	3.8	A	x	A	x	A	x	A	x	A	x	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment												
% Having cooperative or collaborative arrangements	41.7	B	90.2	B	63.0	B	58.9	C	23.5	C	4.8	B
Cooperators/Collaborators:												
Competitors	53.5	C	83.3	C	51.7	C	59.9	C	27.2	C	0.0	A
Clients	69.4	B	93.1	C	65.5	C	39.0	C	14.1	C	0.0	A
Consulting firms	55.5	C	100.0	A	23.6	C	9.0	B	9.0	B	0.0	A
Suppliers	53.2	C	92.2	B	92.2	B	50.7	C	7.8	B	0.0	A
Federal government research institutes	15.3	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	25.8	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	17.9	B	x	A	x	D	x	C	x	D	x	D
Universities	23.1	C	x	A	x	D	x	A	x	A	x	A
Other	13.4	B	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.1

Cooperative and Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, All Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing												
% Having cooperative or collaborative arrangements	20.3	A	72.8	B	45.2	B	36.8	B	17.1	B	4.2	A
Cooperators/Collaborators:												
Competitors	24.5	B	48.5	C	33.2	C	60.7	C	25.2	C	17.2	B
Clients	52.7	B	66.8	C	53.5	C	19.1	B	11.7	B	8.0	B
Consulting firms	34.0	B	100.0	A	40.0	C	27.9	C	16.9	B	0.0	A
Suppliers	89.3	B	71.4	B	30.7	B	32.6	B	7.9	B	4.7	A
Federal government research institutes	7.6	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	9.6	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	15.8	B	x	C	x	C	x	C	x	C	x	C
Universities	10.0	B	x	A	x	A	x	A	x	A	x	A
Other	10.8	B	84.6	C	15.4	C	0.0	A	0.0	A	0.0	A
Miscellaneous Manufacturing												
% Having cooperative or collaborative arrangements	34.3	B	90.3	B	50.5	B	33.6	B	22.9	B	9.7	B
Cooperators/Collaborators:												
Competitors	33.7	B	84.5	C	52.6	C	27.7	C	18.5	C	7.0	B
Clients	55.2	B	75.0	B	54.2	B	38.1	B	15.6	B	13.3	B
Consulting firms	38.7	B	87.9	B	21.6	C	6.1	B	25.3	B	0.0	A
Suppliers	73.1	B	89.4	B	46.4	B	22.3	B	24.0	B	1.7	A
Federal government research institutes	16.4	B	100.0	A	9.3	C	5.6	B	0.0	A	0.0	A
Provincial government institutes	23.9	B	100.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Other firms within your corporate group	32.6	B	83.4	C	34.7	C	12.1	C	13.1	B	0.0	A
Universities	17.0	B	81.8	C	18.2	C	9.3	B	0.0	A	0.0	A
Other	2.5	A	x	D	x	A	x	D	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

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Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries																
% Having cooperative and collaborative arrangements	33.0	A														
Of these, % having only one location	55.3	A	60.8	A	49.4	A	44.7	A	57.0	A	26.6	A	12.9	A	5.5	A
Cooperators/Collaborators:																
Competitors	35.4	A	37.2	A	28.1	A	29.8	A	46.9	A	25.6	A	10.0	A	4.8	A
Clients	65.7	A	43.6	A	35.4	A	42.9	A	55.5	A	18.5	A	12.7	A	4.8	A
Consulting firms	38.7	A	51.3	A	31.7	A	21.8	A	23.8	A	8.0	A	3.5	A	2.1	A
Suppliers	70.1	A	45.7	A	38.3	A	35.4	A	47.5	A	17.3	A	5.9	A	1.9	A
Federal government research institutes	21.7	A	43.2	A	40.1	A	25.8	A	1.6	A	1.1	A	0.0	A	3.1	A
Provincial government institutes	16.4	A	47.7	B	51.0	B	6.0	A	1.7	A	0.0	A	0.0	A	4.1	A
Universities	23.2	A	57.7	A	35.5	A	15.9	A	11.0	A	3.8	A	1.3	A	1.8	A
Other	6.5	A	37.1	B	24.6	B	21.9	B	32.6	B	15.7	B	2.2	A	2.2	A
Food Manufacturing																
% Having cooperative and collaborative arrangements	32.1	A														
Of these, % having only one location	46.2	B	54.9	B	56.0	B	54.0	B	47.9	B	10.7	B	8.7	B	6.6	B
Cooperators/Collaborators:																
Competitors	45.9	B	44.4	B	38.3	B	22.8	B	27.4	B	4.3	A	0.0	A	4.3	A
Clients	67.0	B	36.4	B	44.2	B	46.7	B	35.2	B	5.4	A	12.9	B	1.6	A
Consulting firms	52.1	B	46.1	B	43.3	B	10.2	B	8.9	B	4.3	B	0.0	A	2.1	A
Suppliers	74.1	B	39.7	B	38.1	B	55.4	B	28.7	B	6.9	B	5.5	B	6.2	B
Federal government research institutes	21.1	B	60.9	B	55.7	B	9.4	B	0.0	A	0.0	A	0.0	A	0.0	A
Provincial government institutes	23.9	B	48.2	C	66.5	C	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Universities	21.5	B	45.7	C	38.9	C	5.0	A	10.4	B	0.0	A	0.0	A	0.0	A
Other	3.2	A	x	C	x	A	x	A	x	C	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2
Cooperative or Collaborative Arrangements During the Period 1997-1999
Innovators in Manufacturing
Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries																
% Having cooperative and collaborative arrangements	33.0	A														
Of these, % having only one location	55.3	A	60.8	A	49.4	A	44.7	A	57.0	A	26.6	A	12.9	A	5.5	A
Cooperators/Collaborators:																
Competitors	35.4	A	37.2	A	28.1	A	29.8	A	46.9	A	25.6	A	10.0	A	4.8	A
Clients	65.7	A	43.6	A	35.4	A	42.9	A	55.5	A	18.5	A	12.7	A	4.8	A
Consulting firms	38.7	A	51.3	A	31.7	A	21.8	A	23.8	A	8.0	A	3.5	A	2.1	A
Suppliers	70.1	A	45.7	A	38.3	A	35.4	A	47.5	A	17.3	A	5.9	A	1.9	A
Federal government research institutes	21.7	A	43.2	A	40.1	A	25.8	A	1.6	A	1.1	A	0.0	A	3.1	A
Provincial government institutes	16.4	A	47.7	B	51.0	B	6.0	A	1.7	A	0.0	A	0.0	A	4.1	A
Universities	23.2	A	57.7	A	35.5	A	15.9	A	11.0	A	3.8	A	1.3	A	1.8	A
Other	6.5	A	37.1	B	24.6	B	21.9	B	32.6	B	15.7	B	2.2	A	2.2	A
Food Manufacturing																
% Having cooperative and collaborative arrangements	32.1	A														
Of these, % having only one location	46.2	B	54.9	B	56.0	B	54.0	B	47.9	B	10.7	B	8.7	B	6.6	B
Cooperators/Collaborators:																
Competitors	45.9	B	44.4	B	38.3	B	22.8	B	27.4	B	4.3	A	0.0	A	4.3	A
Clients	67.0	B	36.4	B	44.2	B	46.7	B	35.2	B	5.4	A	12.9	B	1.6	A
Consulting firms	52.1	B	46.1	B	43.3	B	10.2	B	8.9	B	4.3	B	0.0	A	2.1	A
Suppliers	74.1	B	39.7	B	38.1	B	55.4	B	28.7	B	6.9	B	5.5	B	6.2	B
Federal government research institutes	21.1	B	60.9	B	55.7	B	9.4	B	0.0	A	0.0	A	0.0	A	0.0	A
Provincial government institutes	23.9	B	48.2	C	66.5	C	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Universities	21.5	B	45.7	C	38.9	C	5.0	A	10.4	B	0.0	A	0.0	A	0.0	A
Other	3.2	A	x	C	x	A	x	A	x	C	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Beverage and Tobacco Product Manufacturing																
% Having cooperative and collaborative arrangements	49.7	A														
Of these, % having only one location	39.6	B	23.0	B	86.0	A	51.4	B	49.8	B	21.8	B	21.4	B	7.4	B
Cooperators/Collaborators:																
Competitors	71.2	B	19.7	B	70.0	B	62.3	B	9.8	A	0.0	A	0.0	A	0.0	A
Clients	71.2	B	32.3	B	79.8	B	30.0	B	9.8	B	0.0	A	9.8	B	0.0	A
Consulting firms	73.1	B	31.4	B	58.5	B	38.8	B	39.3	B	0.0	A	0.0	A	0.0	A
Suppliers	93.0	A	24.7	B	75.3	B	30.2	B	38.5	B	23.4	B	15.5	B	0.0	A
Federal government research institutes	14.4	B	x	A	x	C	x	A	x	A	x	A	x	A	x	C
Provincial government institutes	14.4	B	x	A	x	C	x	A	x	A	x	A	x	A	x	C
Universities	28.8	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Textile Mills																
% Having cooperative and collaborative arrangements	32.0	A														
Of these, % having only one location	72.7	B	47.0	B	44.6	B	31.7	B	49.5	B	33.2	B	0.0	A	6.4	A
Cooperators/Collaborators:																
Competitors	17.6	B	x	C	x	C	x	C	x	C	x	C	x	A	x	C
Clients	52.1	B	30.5	B	44.2	B	43.0	B	62.5	B	13.7	B	0.0	A	0.0	A
Consulting firms	31.6	B	20.2	B	70.0	B	19.5	B	0.0	A	19.5	B	0.0	A	9.8	B
Suppliers	64.1	B	38.1	B	55.0	B	9.6	B	46.6	B	37.0	B	0.0	A	4.8	A
Federal government research institutes	18.8	B	x	C	x	C	x	C	x	A	x	A	x	A	x	A
Provincial government institutes	12.3	B	x	C	x	C	x	A	x	A	x	A	x	A	x	A
Universities	6.4	A	x	D	x	D	x	A	x	A	x	A	x	A	x	A
Other	6.1	A	x	D	x	A	x	A	x	D	x	D	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Textile Product Mills																
% Having cooperative and collaborative arrangements	36.4	B														
Of these, % having only one location	77.1	B	64.5	B	35.6	B	56.0	B	84.2	B	27.9	B	9.1	B	5.8	B
Cooperators/Collaborators:																
Competitors	26.8	B	x	A	x	D	x	D	x	A	x	C	x	A	x	A
Clients	52.7	B	74.1	C	61.2	C	80.2	C	100.0	A	40.4	C	11.1	B	11.1	B
Consulting firms	31.6	B	x	C	x	C	x	C	x	C	x	A	x	A	x	A
Suppliers	74.7	B	47.6	C	26.8	B	44.7	C	86.4	B	33.1	C	4.4	B	0.0	A
Federal government research institutes	12.7	B	x	D	x	D	x	D	x	D	x	A	x	A	x	A
Provincial government institutes	3.3	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Universities	7.1	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Other	21.0	B	x	C	x	C	x	C	x	C	x	C	x	C	x	C
Clothing Manufacturing																
% Having cooperative and collaborative arrangements	15.9	A														
Of these, % having only one location	63.5	B	56.9	B	39.9	B	56.5	B	56.2	B	47.4	B	27.8	B	2.7	A
Cooperators/Collaborators:																
Competitors	34.1	B	64.4	C	42.3	C	58.4	C	42.3	C	0.0	A	0.0	A	8.0	A
Clients	67.9	B	28.8	C	33.3	C	78.7	B	50.6	C	17.3	C	0.0	A	0.0	A
Consulting firms	46.7	B	64.9	C	23.8	C	53.0	C	0.0	A	0.0	A	0.0	A	5.9	A
Suppliers	85.6	B	40.9	B	16.3	B	39.6	B	55.0	B	42.6	B	19.7	B	0.0	A
Federal government research institutes	13.6	B	x	C	x	A	x	B	x	A	x	A	x	A	x	B
Provincial government institutes	24.7	B	x	C	x	C	x	A	x	A	x	A	x	A	x	A
Universities	24.5	B	x	C	x	A	x	C	x	C	x	C	x	C	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Leather and Allied Product Manufacturing																
% Having cooperative and collaborative arrangements	36.3	B														
Of these, % having only one location	62.8	B	84.2	B	47.4	C	60.5	C	76.3	C	7.9	B	23.7	C	0.0	A
Cooperators/Collaborators:																
Competitors	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clients	76.3	C	69.0	C	41.4	C	20.7	C	31.0	C	10.3	C	10.3	C	0.0	A
Consulting firms	23.7	C	x	D	x	D	x	A	x	D	x	A	x	D	x	A
Suppliers	92.1	B	65.7	C	34.3	C	65.7	C	65.7	C	8.6	B	17.1	C	0.0	A
Federal government research institutes	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Provincial government institutes	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Universities	15.8	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sawmills and Wood Preservation																
% Having cooperative and collaborative arrangements	22.1	A														
Of these, % having only one location	63.4	B	38.4	B	68.8	B	48.1	B	29.1	B	7.7	A	5.5	B	0.0	A
Cooperators/Collaborators:																
Competitors	31.9	B	59.4	C	34.5	C	51.8	C	34.5	C	0.0	A	0.0	A	0.0	A
Clients	37.3	B	50.8	C	19.6	B	34.0	C	34.0	C	0.0	A	14.8	C	0.0	A
Consulting firms	38.7	B	0.0	A	76.9	C	18.5	B	14.3	C	0.0	A	0.0	A	0.0	A
Suppliers	50.9	B	45.1	B	45.7	B	47.4	B	13.8	B	6.7	A	0.0	A	0.0	A
Federal government research institutes	11.6	B	x	C	x	D	x	D	x	A	x	A	x	A	x	A
Provincial government institutes	17.9	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Universities	12.6	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Other	19.0	B	x	C	x	C	x	C	x	A	x	C	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999
Innovators in Manufacturing
Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Veneer, Plywood and Engineered Wood Product Manufacturing																
% Having cooperative and collaborative arrangements	40.2	B														
Of these, % having only one location	54.9	B	54.4	C	60.5	B	40.7	B	45.6	C	24.6	B	12.3	B	0.0	A
Cooperators/Collaborators:																
Competitors	7.3	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Clients	27.2	B	x	A	x	C	x	C	x	C	x	D	x	D	x	A
Consulting firms	47.2	C	x	B	x	C	x	C	x	C	x	A	x	A	x	A
Suppliers	66.2	B	40.4	C	41.0	C	49.8	C	68.9	C	0.0	A	0.0	A	0.0	A
Federal government research institutes	39.4	B	x	A	x	A	x	C	x	A	x	A	x	A	x	A
Provincial government institutes	26.8	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Universities	36.9	B	x	A	x	C	x	A	x	A	x	C	x	A	x	A
Other	6.1	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Other Wood Product Manufacturing																
% Having cooperative and collaborative arrangements	18.0	A														
Of these, % having only one location	76.9	B	79.6	B	57.1	B	53.2	B	32.8	B	3.4	B	8.7	B	0.0	A
Cooperators/Collaborators:																
Competitors	36.2	B	64.7	C	35.3	C	11.6	B	13.5	C	0.0	A	11.6	B	0.0	A
Clients	69.1	B	40.7	B	29.4	B	58.6	B	35.3	B	4.9	B	12.6	B	0.0	A
Consulting firms	40.1	B	38.6	C	50.8	C	40.9	C	0.0	A	0.0	A	0.0	A	0.0	A
Suppliers	75.5	B	56.0	B	64.1	B	26.3	B	22.0	C	0.0	A	0.0	A	0.0	A
Federal government research institutes	24.3	B	x	C	x	C	x	C	x	A	x	A	x	A	x	A
Provincial government institutes	12.1	B	x	D	x	D	x	A	x	A	x	A	x	A	x	A
Universities	32.2	B	35.1	C	51.8	C	13.1	B	0.0	A	0.0	A	0.0	A	0.0	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Paper Manufacturing																
% Having cooperative and collaborative arrangements	39.0	A														
Of these, % having only one location	41.1	B	48.7	B	49.5	B	63.0	B	58.1	B	30.0	B	3.1	A	2.8	A
Cooperators/Collaborators:																
Competitors	27.6	B	15.9	C	47.8	B	41.9	B	58.1	B	68.1	B	11.3	B	10.3	B
Clients	63.1	B	34.1	B	25.3	B	54.4	B	70.4	B	0.0	A	0.0	A	0.0	A
Consulting firms	62.4	B	0.0	A	30.6	B	52.8	B	19.1	B	16.1	B	0.0	A	4.5	A
Suppliers	91.3	A	17.5	B	22.3	B	47.1	B	49.6	B	20.4	B	3.4	A	0.0	A
Federal government research institutes	14.5	A	x	B	x	C	x	A	x	A	x	A	x	A	x	B
Provincial government institutes	5.7	A	x	A	x	C	x	A	x	A	x	A	x	A	x	C
Universities	31.0	B	54.5	B	36.3	B	0.0	A	18.3	B	0.0	A	0.0	A	9.2	B
Other	10.0	B	x	C	x	C	x	D	x	A	x	A	x	A	x	A
Printing and Related Support Activities																
% Having cooperative and collaborative arrangements	26.9	A														
Of these, % having only one location	39.4	B	62.8	C	42.1	C	28.5	B	64.6	C	18.6	C	0.0	A	0.0	A
Cooperators/Collaborators:																
Competitors	34.9	C	45.0	C	11.0	B	0.0	A	66.5	C	0.0	A	0.0	A	0.0	A
Clients	71.1	C	68.9	C	42.5	C	27.6	C	36.3	C	14.9	B	0.0	A	0.0	A
Consulting firms	15.4	C	x	D	x	D	x	D	x	D	x	D	x	A	x	A
Suppliers	78.3	B	37.7	C	43.9	C	23.1	C	67.2	C	10.2	C	0.0	A	0.0	A
Federal government research institutes	4.0	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	4.0	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Universities	8.0	B	x	A	x	D	x	A	x	A	x	A	x	A	x	A
Other	4.5	B	x	A	x	A	x	D	x	D	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing																
% Having cooperative and collaborative arrangements	34.1	A														
Of these, % having only one location	28.6	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Cooperators/Collaborators:																
Competitors	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Clients	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Consulting firms	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Suppliers	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Federal government research institutes	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Universities	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Other	x	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chemical Manufacturing (excluding 3254)																
% Having cooperative and collaborative arrangements	39.3	A														
Of these, % having only one location	49.2	B	62.0	B	45.8	B	57.3	B	69.3	B	25.5	B	12.4	B	1.5	A
Cooperators/Collaborators:																
Competitors	45.0	B	30.0	B	45.2	B	51.4	B	51.6	B	20.8	B	24.3	B	3.2	A
Clients	67.7	B	44.8	B	31.7	B	58.0	B	67.0	B	18.6	B	12.4	B	0.0	A
Consulting firms	39.2	B	62.1	B	37.2	B	14.8	B	31.8	B	0.0	A	0.0	A	0.0	A
Suppliers	59.0	B	37.3	B	36.0	B	52.1	B	75.5	B	8.9	B	4.5	B	0.0	A
Federal government research institutes	26.6	B	49.3	B	11.3	B	39.4	B	0.0	A	0.0	A	0.0	A	0.0	A
Provincial government institutes	27.0	B	84.8	B	0.0	A	5.4	A	9.8	B	0.0	A	0.0	A	0.0	A
Universities	19.7	B	67.8	C	38.1	C	15.6	B	8.1	B	8.1	B	0.0	A	0.0	A
Other	14.0	B	29.2	C	18.8	C	18.8	C	64.4	C	43.9	C	0.0	A	0.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Pharmaceutical and Medicine Manufacturing (3254)																
% Having cooperative and collaborative arrangements	61.4	B														
Of these, % having only one location	54.4	B	71.3	B	40.3	B	82.5	B	54.8	B	31.0	B	19.6	B	11.9	B
Cooperators/Collaborators:																
Competitors	61.9	B	63.9	B	19.3	B	63.9	B	27.1	B	9.0	A	9.0	A	9.0	A
Clients	49.3	B	24.2	B	24.2	B	75.8	B	75.8	B	28.9	B	28.9	B	24.2	B
Consulting firms	59.4	B	81.2	A	9.4	A	56.0	B	28.3	B	0.0	A	0.0	A	0.0	A
Suppliers	49.3	B	37.1	B	24.2	B	87.1	B	46.9	B	22.7	B	0.0	A	0.0	A
Federal government research institutes	5.6	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Universities	45.2	B	87.6	A	62.8	B	87.6	A	24.8	B	12.4	A	0.0	A	0.0	A
Other	6.3	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Plastics and Rubber Products Manufacturing																
% Having cooperative and collaborative arrangements	33.4	A														
Of these, % having only one location	57.1	B	60.7	B	50.5	B	45.8	B	61.3	B	23.3	B	10.6	B	16.4	B
Cooperators/Collaborators:																
Competitors	24.1	B	21.8	B	16.0	B	51.7	C	76.0	C	27.0	C	12.6	B	28.6	B
Clients	65.3	B	42.5	B	36.0	B	48.0	B	60.9	B	8.8	B	4.4	A	19.7	B
Consulting firms	39.6	B	52.6	B	31.2	B	26.2	B	29.4	B	14.9	B	5.9	B	5.9	B
Suppliers	73.4	B	46.2	B	37.5	B	39.3	B	50.4	B	19.9	B	3.2	A	5.0	B
Federal government research institutes	23.4	B	64.7	B	18.0	B	34.6	B	0.0	A	0.0	A	0.0	A	0.0	A
Provincial government institutes	7.2	A	x	C	x	C	x	C	x	A	x	A	x	A	x	A
Universities	22.8	B	56.6	B	17.9	B	17.9	B	30.7	B	0.0	A	0.0	A	5.2	A
Other	8.1	A	x	C	x	C	x	C	x	C	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Non-Metallic Mineral Products Manufacturing																
% Having cooperative and collaborative arrangements	32.4	A														
Of these, % having only one location	40.6	B	73.4	B	66.0	B	26.6	B	55.3	B	18.9	B	8.6	B	0.0	A
Cooperators/Collaborators:																
Competitors	53.3	B	20.5	B	38.2	C	0.0	A	35.7	C	5.6	B	0.0	A	0.0	A
Clients	58.7	B	65.3	B	44.3	C	19.7	C	19.7	C	14.7	C	14.7	C	0.0	A
Consulting firms	45.0	B	75.0	C	13.2	B	0.0	A	18.4	C	9.5	C	0.0	A	0.0	A
Suppliers	85.2	B	38.3	B	53.5	B	21.1	B	54.0	B	18.6	B	0.0	A	0.0	A
Federal government research institutes	31.3	B	71.4	C	28.6	C	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Provincial government institutes	11.9	B	x	D	x	D	x	A	x	A	x	A	x	A	x	A
Universities	28.8	B	31.1	C	68.9	C	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Other	3.0	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Primary Metal Manufacturing																
% Having cooperative and collaborative arrangements	39.0	A														
Of these, % having only one location	66.0	B	35.8	B	58.1	B	37.7	B	71.4	B	24.2	B	12.3	A	4.8	A
Cooperators/Collaborators:																
Competitors	39.6	B	45.4	B	12.8	B	27.8	B	54.7	B	21.5	B	24.9	B	0.0	A
Clients	73.7	B	24.5	B	33.5	B	21.8	B	68.9	B	18.1	B	6.6	A	3.3	A
Consulting firms	33.7	B	45.8	B	39.9	B	28.9	B	29.1	B	14.5	B	0.0	A	0.0	A
Suppliers	72.9	A	32.1	B	40.0	B	28.7	B	59.3	B	3.3	A	6.7	A	3.2	A
Federal government research institutes	30.2	B	24.6	B	43.3	B	32.0	B	8.1	A	8.1	A	0.0	A	0.0	A
Provincial government institutes	25.3	B	80.7	B	19.3	B	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Universities	31.3	B	80.8	B	19.4	B	24.0	B	15.5	B	0.0	A	0.0	A	0.0	A
Other	7.4	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing																
% Having cooperative and collaborative arrangements	30.4	A														
Of these, % having only one location	60.8	B	69.7	B	51.7	B	39.6	B	53.2	B	22.9	B	5.8	B	2.6	A
Cooperators/Collaborators:																
Competitors	39.2	B	47.4	C	23.9	B	18.7	B	28.4	B	33.9	C	0.0	A	0.0	A
Clients	65.0	B	63.2	B	38.9	B	32.7	B	51.1	B	12.4	B	8.9	B	4.0	A
Consulting firms	35.1	B	44.2	C	30.8	C	26.3	C	22.9	C	5.2	B	0.0	A	0.0	A
Suppliers	69.0	B	58.5	B	31.7	B	22.1	B	36.6	B	10.8	B	0.9	A	0.9	A
Federal government research institutes	28.4	B	52.3	C	39.2	C	10.7	B	0.0	A	0.0	A	0.0	A	0.0	A
Provincial government institutes	19.0	B	47.1	C	46.5	C	6.4	B	0.0	A	0.0	A	0.0	A	0.0	A
Universities	24.3	B	57.5	C	33.2	C	20.1	C	0.0	A	0.0	A	0.0	A	0.0	A
Other	4.4	A	x	C	x	A	x	A	x	C	x	C	x	A	x	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)																
% Having cooperative and collaborative arrangements	40.0	A														
Of these, % having only one location	64.4	B	70.8	B	51.3	B	57.0	B	58.6	B	32.3	B	27.1	B	21.2	B
Cooperators/Collaborators:																
Competitors	29.7	B	42.2	B	29.4	B	14.0	B	62.3	B	42.2	B	20.7	B	6.7	B
Clients	78.8	B	57.7	B	29.2	B	50.0	B	69.5	B	32.8	B	34.4	B	21.1	B
Consulting firms	42.1	B	38.8	B	31.8	B	5.1	A	29.3	B	14.6	B	0.0	A	0.0	A
Suppliers	56.3	B	57.0	B	27.9	B	42.4	B	60.0	B	29.7	B	3.5	A	4.1	A
Federal government research institutes	28.6	B	23.7	B	54.4	C	29.5	B	0.0	A	0.0	A	0.0	A	16.2	B
Provincial government institutes	22.3	B	51.1	C	48.9	C	0.0	A	0.0	A	0.0	A	0.0	A	20.8	B
Universities	38.5	B	60.9	B	34.0	B	16.6	B	0.0	A	11.4	B	0.0	A	5.2	B
Other	8.0	A	x	D	x	D	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)																
% Having cooperative and collaborative arrangements	38.7	B														
Of these, % having only one location	65.3	B	60.6	B	36.5	B	27.4	B	49.1	B	28.6	B	8.2	B	9.9	B
Cooperators/Collaborators:																
Competitors	39.9	B	27.5	C	10.5	B	18.9	B	46.8	C	32.0	C	2.0	A	13.3	B
Clients	63.5	B	26.3	B	28.1	B	27.9	B	55.1	B	17.1	B	12.9	B	7.3	B
Consulting firms	37.4	B	66.0	C	22.3	C	15.1	B	21.7	B	17.1	B	9.7	B	0.0	A
Suppliers	61.2	B	58.3	B	19.3	B	22.8	B	29.8	B	19.5	B	1.3	A	4.2	A
Federal government research institutes	13.0	B	...	D	34.9	C	8.8	B	0.0	A	0.0	A	0.0	A	13.3	B
Provincial government institutes	8.7	A	...	D	39.0	C	0.0	A	0.0	A	0.0	A	0.0	A	19.9	C
Universities	19.9	B	78.1	B	31.8	C	18.5	C	10.1	C	0.0	A	0.0	A	8.7	B
Other	4.4	A	x	D	x	A	x	A	x	A	x	D	x	A	x	A
Computer and Peripheral Equipment Manufacturing																
% Having cooperative and collaborative arrangements	53.1	B														
Of these, % having only one location	49.6	B	55.9	B	64.7	B	55.8	B	82.4	A	52.9	B	73.5	B	0.0	A
Cooperators/Collaborators:																
Competitors	47.1	B	x	B	x	A	x	A	x	C	x	C	x	C	x	A
Clients	64.7	B	27.3	B	43.2	C	43.2	C	86.4	A	40.9	B	27.3	B	0.0	A
Consulting firms	27.9	B	x	C	x	A	x	C	x	C	x	C	x	A	x	A
Suppliers	91.2	A	30.6	B	51.6	B	51.6	B	71.0	B	38.7	B	59.7	B	0.0	A
Federal government research institutes	27.9	B	x	D	x	D	x	A	x	C	x	C	x	A	x	A
Provincial government institutes	10.3	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Universities	27.9	B	x	A	x	D	x	A	x	A	x	A	x	A	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Communications Equipment Manufacturing																
% Having cooperative and collaborative arrangements	46.9	B														
Of these, % having only one location	54.0	B	79.9	B	42.7	B	86.9	A	86.9	A	33.4	B	33.4	B	7.1	B
Cooperators/Collaborators:																
Competitors	44.0	B	x	C	x	C	x	C	x	C	x	A	x	A	x	A
Clients	79.9	B	49.3	C	28.2	C	100.0	A	100.0	A	31.4	C	31.4	C	0.0	A
Consulting firms	39.3	B	x	C	x	C	x	A	x	C	x	A	x	A	x	A
Suppliers	38.0	B	x	A	x	C	x	C	x	C	x	C	x	C	x	A
Federal government research institutes	22.6	B	x	C	x	A	x	A	x	A	x	A	x	A	x	C
Provincial government institutes	22.6	B	x	C	x	A	x	A	x	A	x	A	x	A	x	C
Universities	47.6	B	x	C	x	C	x	C	x	A	x	A	x	A	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Audio and Video Equipment Manufacturing																
% Having cooperative and collaborative arrangements	x	A														
Of these, % having only one location	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Cooperators/Collaborators:																
Competitors	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Clients	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Consulting firms	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Suppliers	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Federal government research institutes	x	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	x	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Universities	x	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	x	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing																
% Having cooperative and collaborative arrangements	56.5	B														
Of these, % having only one location	37.4	B	89.8	A	42.7	B	68.2	B	89.2	A	68.2	B	21.7	B	0.0	A
Cooperators/Collaborators:																
Competitors	52.9	B	x	A	x	A	x	B	x	B	x	B	x	A	x	A
Clients	89.2	A	24.3	B	47.9	B	64.3	B	100.0	A	64.3	B	24.3	B	0.0	A
Consulting firms	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Suppliers	74.5	B	43.6	B	42.7	B	57.3	B	70.9	B	29.1	B	29.1	B	0.0	A
Federal government research institutes	42.0	B	x	B	x	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	21.0	B	x	D	x	D	x	A	x	A	x	A	x	A	x	A
Universities	47.1	B	x	A	x	B	x	A	x	A	x	A	x	A	x	A
Other	25.5	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media																
% Having cooperative and collaborative arrangements	50.1	B														
Of these, % having only one location	53.8	B	66.4	B	53.1	B	64.4	B	75.0	B	67.5	B	49.3	B	6.5	A
Cooperators/Collaborators:																
Competitors	23.7	B	28.5	B	43.0	B	28.5	B	86.1	B	82.8	B	68.8	B	14.5	B
Clients	79.3	B	31.2	B	23.0	B	45.4	B	73.0	B	54.8	B	49.9	B	3.9	A
Consulting firms	27.3	B	74.7	B	12.6	B	0.0	A	37.9	C	12.6	B	0.0	A	0.0	A
Suppliers	52.8	B	71.2	C	80.9	C	61.6	C	86.9	C	61.6	C	14.3	B	0.0	A
Federal government research institutes	38.7	B	53.3	C	56.2	C	83.6	B	0.0	A	0.0	A	0.0	A	0.0	A
Provincial government institutes	17.6	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Universities	31.5	B	89.0	C	66.4	C	10.5	B	0.0	A	11.0	C	0.0	A	0.0	A
Other	14.1	B	x	C	x	D	x	D	x	C	x	C	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Electrical Equipment, Appliance and Component Manufacturing																
% Having cooperative and collaborative arrangements	44.1	A														
Of these, % having only one location	56.8	B	61.1	B	52.2	B	57.5	B	88.5	A	55.7	B	34.5	B	9.3	B
Cooperators/Collaborators:																
Competitors	39.8	B	45.7	C	43.4	C	70.9	C	89.4	B	89.5	A	53.6	C	0.0	A
Clients	71.7	B	42.4	B	43.1	B	65.7	B	89.8	B	28.4	B	25.5	B	7.3	B
Consulting firms	47.3	B	57.2	B	11.1	B	15.5	B	43.2	B	15.2	B	6.7	B	15.2	B
Suppliers	76.8	B	42.9	B	47.5	B	49.5	B	77.0	B	27.9	B	21.3	B	5.3	B
Federal government research institutes	27.7	B	30.3	C	0.0	A	60.9	C	11.4	C	8.8	B	0.0	A	0.0	A
Provincial government institutes	30.8	B	24.4	C	56.6	C	32.2	C	13.1	B	0.0	A	0.0	A	0.0	A
Universities	34.7	B	39.3	C	6.0	A	12.0	A	54.7	C	0.0	A	0.0	A	0.0	A
Other	6.4	A	x	A	x	D	x	A	x	D	x	D	x	A	x	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing																
% Having cooperative and collaborative arrangements	38.0	B														
Of these, % having only one location	66.0	B	57.7	B	42.4	B	31.3	B	54.1	B	27.0	B	7.8	B	3.4	A
Cooperators/Collaborators:																
Competitors	17.9	B	25.8	C	0.0	A	18.8	C	64.8	C	16.4	C	0.0	A	0.0	A
Clients	73.7	B	22.8	B	38.0	B	31.7	B	51.0	B	26.4	B	4.6	B	2.3	A
Consulting firms	27.2	B	62.7	C	41.4	C	0.0	A	47.6	C	0.0	A	16.5	B	6.2	B
Suppliers	72.7	B	45.0	B	41.7	B	17.3	B	47.0	B	6.3	B	0.0	A	0.0	A
Federal government research institutes	34.3	B	34.5	C	65.5	C	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Provincial government institutes	20.7	B	33.9	C	66.1	C	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Universities	26.1	B	51.2	C	36.0	C	6.4	B	6.4	B	0.0	A	0.0	A	0.0	A
Other	1.6	A	x	A	x	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Aerospace Product and Parts Manufacturing																
% Having cooperative and collaborative arrangements	50.9	B														
Of these, % having only one location	32.2	B	53.9	C	41.8	C	63.9	C	75.9	C	75.9	C	0.0	A	0.0	A
Cooperators/Collaborators:																
Competitors	65.9	C	x	C	x	C	x	C	x	C	x	C	x	A	x	A
Clients	89.8	A	48.6	C	13.4	C	35.2	C	48.6	C	46.4	C	0.0	A	0.0	A
Consulting firms	22.1	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Suppliers	29.8	C	x	A	x	A	x	A	x	A	x	C	x	A	x	A
Federal government research institutes	29.8	C	x	A	x	C	x	C	x	A	x	A	x	A	x	A
Provincial government institutes	29.8	C	x	A	x	C	x	C	x	A	x	A	x	A	x	A
Universities	51.8	C	x	C	x	A	x	C	x	B	x	A	x	A	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment																
% Having cooperative and collaborative arrangements	41.7	B														
Of these, % having only one location	54.3	C	72.8	C	58.6	C	48.3	C	49.9	C	31.9	C	0.0	A	0.0	A
Cooperators/Collaborators:																
Competitors	38.4	C	x	D	x	A	x	D	x	D	x	D	x	A	x	A
Clients	67.8	C	26.6	C	...	D	...	D	59.9	C	...	D	0.0	A	0.0	A
Consulting firms	50.9	C	x	D	x	D	x	D	x	D	x	A	x	A	x	A
Suppliers	48.3	C	x	C	x	C	x	A	x	C	x	B	x	A	x	A
Federal government research institutes	17.9	C	x	D	x	A	x	D	x	A	x	A	x	A	x	A
Provincial government institutes	28.1	C	x	D	x	D	x	A	x	A	x	A	x	A	x	A
Universities	16.9	C	x	D	x	D	x	A	x	A	x	A	x	A	x	A
Other	16.9	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.2

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Single Location Firms

	Anywhere		Within 100 km		In the rest of your province		In the rest of Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing																
% Having cooperative and collaborative arrangements	20.3	A														
Of these, % having only one location	61.2	B	68.5	B	52.7	B	31.8	B	33.5	B	18.6	B	8.5	B	0.0	A
Cooperators/Collaborators:																
Competitors	20.8	B	x	D	x	A	x	A	x	D	x	C	x	C	x	A
Clients	64.4	B	59.0	C	18.3	B	19.7	C	37.7	C	10.0	B	5.0	B	0.0	A
Consulting firms	37.6	B	83.8	C	8.5	C	7.6	B	17.0	C	7.6	B	0.0	A	0.0	A
Suppliers	87.4	B	25.8	B	49.2	C	17.2	B	14.2	B	10.7	B	2.4	B	0.0	A
Federal government research institutes	12.4	B	x	D	x	D	x	D	x	A	x	A	x	A	x	A
Provincial government institutes	15.6	B	x	D	x	D	x	A	x	A	x	A	x	A	x	A
Universities	13.2	B	x	D	x	D	x	A	x	A	x	A	x	A	x	A
Other	15.0	B	x	A	x	D	x	D	x	A	x	A	x	A	x	A
Miscellaneous Manufacturing																
% Having cooperative and collaborative arrangements	34.3	B														
Of these, % having only one location	47.9	B	49.5	B	43.9	B	26.0	B	46.3	B	19.0	B	18.5	B	0.0	A
Cooperators/Collaborators:																
Competitors	31.4	B	26.7	C	38.0	C	41.4	C	45.8	C	26.2	C	15.7	C	0.0	A
Clients	57.1	B	32.5	C	19.4	B	38.5	C	42.2	C	24.2	C	20.4	B	0.0	A
Consulting firms	35.1	B	49.9	C	5.2	B	17.0	B	9.0	C	0.0	A	27.9	C	0.0	A
Suppliers	68.3	B	49.4	C	28.5	B	21.4	B	35.8	B	23.0	C	19.8	B	0.0	A
Federal government research institutes	9.1	B	x	A	x	D	x	D	x	A	x	A	x	A	x	A
Provincial government institutes	12.4	B	x	C	x	C	x	A	x	A	x	A	x	A	x	A
Universities	5.0	B	x	D	x	D	x	A	x	A	x	A	x	A	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.3

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Multiple Location Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries												
% Having cooperative and collaborative arrangements	33.0	A										
Of these, % having more than one location	44.7	A	87.7	A	74.5	A	41.8	A	21.5	A	12.8	A
Cooperators/Collaborators:												
Competitors	35.2	A	63.2	A	57.9	A	31.5	A	14.5	A	8.0	A
Clients	64.0	A	78.6	A	67.5	A	26.8	A	16.8	A	12.9	A
Consulting firms	40.1	A	82.6	A	45.1	A	18.3	A	5.1	A	3.1	A
Suppliers	73.0	A	80.2	A	70.6	A	30.6	A	12.9	A	4.5	A
Federal government research institutes	20.2	A	94.4	A	18.3	A	5.3	A	1.0	A	3.1	A
Provincial government institutes	16.0	A	92.0	A	15.6	A	3.1	A	0.6	A	3.3	A
Other firms within your corporate group	50.4	A	70.9	A	54.1	A	30.1	A	10.9	A	5.2	A
Universities	24.2	A	86.4	A	27.1	A	9.7	A	2.1	A	3.0	A
Other	5.1	A	61.8	B	35.9	B	23.0	B	8.6	A	5.7	B
Food Manufacturing												
% Having cooperative and collaborative arrangements	32.1	A										
Of these, % having more than one location	53.8	B	96.2	A	82.7	B	42.8	B	23.5	B	7.9	A
Cooperators/Collaborators:												
Competitors	42.9	B	66.4	B	57.1	B	22.5	B	0.0	A	6.5	A
Clients	66.4	B	78.7	B	45.1	B	27.4	B	18.2	B	9.1	B
Consulting firms	47.2	B	70.7	B	37.3	B	21.1	B	0.0	A	2.8	A
Suppliers	80.3	B	83.7	B	78.5	B	27.3	B	1.1	A	1.1	A
Federal government research institutes	33.4	B	96.0	A	12.5	B	8.5	B	2.8	A	0.0	A
Provincial government institutes	18.9	B	83.9	B	16.1	B	0.0	A	0.0	A	0.0	A
Other firms within your corporate group	66.4	B	73.6	B	46.3	B	29.3	B	15.8	B	0.0	A
Universities	27.3	B	100.0	A	34.9	C	3.4	A	3.4	A	3.4	A
Other	3.8	A	x	C	x	A	x	C	x	A	x	A
Beverage and Tobacco Product Manufacturing												
% Having cooperative and collaborative arrangements	49.7	A										
Of these, % having more than one location	50.4	B	90.5	A	80.7	B	49.5	B	30.8	B	15.4	B
Cooperators/Collaborators:												
Competitors	39.9	B	75.1	B	62.9	C	24.5	B	0.0	A	12.4	B
Clients	51.9	B	89.4	B	90.3	B	9.3	B	10.6	B	0.0	A
Consulting firms	70.6	B	100.0	A	86.3	B	13.3	B	0.0	A	0.0	A
Suppliers	90.5	A	100.0	A	83.9	B	27.3	B	11.1	A	0.0	A
Federal government research institutes	14.6	B	x	A	x	C	x	A	x	A	x	A
Provincial government institutes	15.3	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	71.2	B	72.1	B	64.5	B	6.9	B	0.0	A	14.7	B
Universities	36.4	B	100.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Other	19.9	B	x	A	x	A	x	A	x	B	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.3

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Multiple Location Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	**Reliability**	**Percent**	**Reliability**	**Percent**	**Reliability**	**Percent**	**Reliability**	**Percent**	**Reliability**	**Percent**	**Reliability**
Total Manufacturing Industries												
% Having cooperative and collaborative arrangements	33.0	A										
Of these, % having more than one location	44.7	A	87.7	A	74.5	A	41.8	A	21.5	A	12.8	A
Cooperators/Collaborators:												
Competitors	35.2	A	63.2	A	57.9	A	31.5	A	14.5	A	8.0	A
Clients	64.0	A	78.6	A	67.5	A	26.8	A	16.8	A	12.9	A
Consulting firms	40.1	A	82.6	A	45.1	A	18.3	A	5.1	A	3.1	A
Suppliers	73.0	A	80.2	A	70.6	A	30.6	A	12.9	A	4.5	A
Federal government research institutes	20.2	A	94.4	A	18.3	A	5.3	A	1.0	A	3.1	A
Provincial government institutes	16.0	A	92.0	A	15.6	A	3.1	A	0.6	A	3.3	A
Other firms within your corporate group	50.4	A	70.9	A	54.1	A	30.1	A	10.9	A	5.2	A
Universities	24.2	A	86.4	A	27.1	A	9.7	A	2.1	A	3.0	A
Other	5.1	A	61.8	B	35.9	B	23.0	B	8.6	A	5.7	B
Food Manufacturing												
% Having cooperative and collaborative arrangements	32.1	A										
Of these, % having more than one location	53.8	B	96.2	A	82.7	B	42.8	B	23.5	B	7.9	A
Cooperators/Collaborators:												
Competitors	42.9	B	66.4	B	57.1	B	22.5	B	0.0	A	6.5	A
Clients	66.4	B	78.7	B	45.1	B	27.4	B	18.2	B	9.1	B
Consulting firms	47.2	B	70.7	B	37.3	B	21.1	B	0.0	A	2.8	A
Suppliers	80.3	B	83.7	B	78.5	B	27.3	B	1.1	A	1.1	A
Federal government research institutes	33.4	B	96.0	A	12.5	B	8.5	B	2.8	A	0.0	A
Provincial government institutes	18.9	B	83.9	B	16.1	B	0.0	A	0.0	A	0.0	A
Other firms within your corporate group	66.4	B	73.6	B	46.3	B	29.3	B	15.8	B	0.0	A
Universities	27.3	B	100.0	A	34.9	C	3.4	A	3.4	A	3.4	A
Other	3.8	A	x	C	x	A	x	C	x	A	x	A
Beverage and Tobacco Product Manufacturing												
% Having cooperative and collaborative arrangements	49.7	A										
Of these, % having more than one location	60.4	B	90.5	A	80.7	B	49.5	B	30.8	B	15.4	B
Cooperators/Collaborators:												
Competitors	39.9	B	75.1	B	62.9	C	24.5	B	0.0	A	12.4	B
Clients	51.9	B	89.4	B	90.3	B	9.3	B	10.6	B	0.0	A
Consulting firms	70.6	B	100.0	A	86.3	B	13.3	B	0.0	A	0.0	A
Suppliers	90.5	A	100.0	A	83.9	B	27.3	B	11.1	A	0.0	A
Federal government research institutes	14.6	B	x	A	x	C	x	A	x	A	x	A
Provincial government institutes	15.3	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	71.2	B	72.1	B	64.5	B	6.9	B	0.0	A	14.7	B
Universities	36.4	B	100.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Other	19.9	B	x	A	x	A	x	A	x	B	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.3

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Multiple Location Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Textile Mills												
% Having cooperative and collaborative arrangements	32.0	A										
Of these, % having more than one location	27.3	B	83.6	B	82.9	B	66.7	C	24.5	B	16.2	B
Cooperators/Collaborators:												
Competitors	50.4	C	x	C	x	C	x	C	x	A	x	A
Clients	59.3	C	100.0	A	71.2	C	0.0	A	0.0	A	0.0	A
Consulting firms	41.7	C	x	C	x	C	x	A	x	A	x	A
Suppliers	75.7	C	55.9	C	53.9	C	77.4	B	21.7	B	0.0	A
Federal government research institutes	16.3	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	0.0	A	-	-	-	-	-	-	-	-	-	-
Other firms within your corporate group	41.3	C	x	C	x	C	x	C	x	C	x	C
Universities	16.2	B	x	A	x	A	x	A	x	A	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Textile Product Mills												
% Having cooperative and collaborative arrangements	36.4	B										
Of these, % having more than one location	22.9	B	88.8	C	88.9	C	...	D	22.4	C	22.4	C
Cooperators/Collaborators:												
Competitors	...	D	x	D	x	A	x	A	x	A	x	D
Clients	...	D	x	A	x	A	x	A	x	A	x	D
Consulting firms	22.4	C	x	D	x	A	x	A	x	A	x	D
Suppliers	88.9	C	87.4	C	100.0	A	...	D	...	D	0.0	A
Federal government research institutes	...	D	x	D	x	A	x	A	x	A	x	D
Provincial government institutes	...	D	x	D	x	A	x	A	x	A	x	D
Other firms within your corporate group	67.0	C	x	D	x	C	x	C	x	A	x	A
Universities	22.3	C	x	D	x	A	x	A	x	A	x	D
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Clothing Manufacturing												
% Having cooperative and collaborative arrangements	15.9	A										
Of these, % having more than one location	36.5	B	90.0	B	74.1	B	16.9	B	11.6	B	16.6	B
Cooperators/Collaborators:												
Competitors	53.3	C	x	A	x	C	x	C	x	C	x	A
Clients	89.7	B	88.9	B	65.0	C	18.8	B	12.9	B	6.5	B
Consulting firms	53.0	C	x	A	x	C	x	A	x	A	x	A
Suppliers	59.1	C	x	B	x	B	x	C	x	C	x	C
Federal government research institutes	10.8	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	10.8	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	48.0	C	x	C	x	C	x	C	x	C	x	C
Universities	10.8	B	x	D	x	D	x	A	x	A	x	D
Other	5.0	B	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.3

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Multiple Location Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Leather and Allied Product Manufacturing												
% Having cooperative and collaborative arrangements	36.3	B										
Of these, % having more than one location	37.2	B	x	C	x	A	x	C	x	C	x	A
Cooperators/Collaborators:												
Competitors	x	C	x	C	x	A	x	C	x	C	x	A
Clients	x	C	x	C	x	A	x	C	x	C	x	A
Consulting firms	x	C	x	A	x	A	x	A	x	A	x	A
Suppliers	x	A	x	C	x	A	x	C	x	C	x	A
Federal government research institutes	x	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	x	C	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	x	C	x	C	x	C	x	A	x	A	x	A
Universities	x	B	x	A	x	A	x	A	x	A	x	A
Other	x	A	-	-	-	-	-	-	-	-	-	-
Sawmills and Wood Preservation												
% Having cooperative and collaborative arrangements	22.1	A										
Of these, % having more than one location	36.6	B	93.7	B	40.6	B	28.3	B	15.8	B	6.2	A
Cooperators/Collaborators:												
Competitors	49.4	C	87.3	C	44.6	C	25.2	C	12.7	C	0.0	A
Clients	33.6	B	x	A	x	C	x	A	x	C	x	B
Consulting firms	52.8	C	100.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Suppliers	59.8	B	89.2	B	47.6	C	26.4	C	0.0	A	10.4	B
Federal government research institutes	12.4	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	5.9	A	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	12.4	B	x	A	x	A	x	A	x	A	x	A
Universities	0.0	A	-	-	-	-	-	-	-	-	-	-
Other	34.8	C	x	C	x	A	x	C	x	A	x	A
Veneer, Plywood and Engineered Wood Product Manufacturing												
% Having cooperative and collaborative arrangements	40.2	B										
Of these, % having more than one location	45.1	B	100.0	A	57.4	B	7.9	B	18.5	B	0.0	A
Cooperators/Collaborators:												
Competitors	84.5	B	89.0	B	49.7	C	9.4	B	0.0	A	0.0	A
Clients	58.5	B	84.2	B	43.1	C	0.0	A	31.6	C	0.0	A
Consulting firms	49.4	B	x	A	x	C	x	A	x	A	x	A
Suppliers	57.1	B	100.0	A	43.9	C	13.8	C	0.0	A	0.0	A
Federal government research institutes	33.3	B	x	A	x	C	x	A	x	A	x	A
Provincial government institutes	41.3	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	51.2	B	x	C	x	C	x	A	x	A	x	A
Universities	24.0	B	x	A	x	C	x	A	x	A	x	A
Other	24.8	B	x	A	x	D	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.3

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Multiple Location Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Other Wood Product Manufacturing												
% Having cooperative and collaborative arrangements	18.0	A										
Of these, % having more than one location	23.1	B	86.8	C	...	D	0.0	A	13.2	C	13.2	C
Cooperators/Collaborators:												
Competitors	38.6	C	x	A	x	A	x	A	x	A	x	A
Clients	...	D	x	D	x	D	x	A	x	D	x	D
Consulting firms	13.2	C	x	A	x	A	x	A	x	A	x	A
Suppliers	...	D	x	A	x	A	x	A	x	A	x	A
Federal government research institutes	0.0	A	-	-	-	-	-	-	-	-	-	-
Provincial government institutes	0.0	A	-	-	-	-	-	-	-	-	-	-
Other firms within your corporate group	...	D	x	D	x	D	x	A	x	A	x	A
Universities	10.7	C	x	A	x	A	x	A	x	A	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Paper Manufacturing												
% Having cooperative and collaborative arrangements	39.0	A										
Of these, % having more than one location	58.9	B	91.9	B	85.8	B	45.7	B	5.0	A	15.8	B
Cooperators/Collaborators:												
Competitors	22.9	B	43.9	C	53.2	C	24.9	B	8.4	A	8.6	B
Clients	64.6	B	96.6	A	62.4	B	14.3	B	4.7	B	18.4	B
Consulting firms	53.6	B	96.3	A	45.2	B	19.0	B	0.0	A	0.0	A
Suppliers	85.1	B	84.3	B	84.1	B	37.4	B	0.0	A	5.9	A
Federal government research institutes	14.1	A	85.9	B	0.0	A	0.0	A	0.0	A	14.1	B
Provincial government institutes	11.9	A	x	B	x	B	x	A	x	A	x	B
Other firms within your corporate group	60.8	B	73.1	B	53.5	B	28.4	B	0.0	A	5.0	B
Universities	27.4	B	73.7	B	19.1	B	0.0	A	0.0	A	7.2	B
Other	9.2	A	x	C	x	C	x	A	x	A	x	A
Printing and Related Support Activities												
% Having cooperative and collaborative arrangements	26.9	A										
Of these, % having more than one location	60.6	B	89.5	B	74.3	B	27.0	B	9.7	B	6.9	B
Cooperators/Collaborators:												
Competitors	28.2	B	84.1	C	...	D	4.6	C	11.3	C	0.0	A
Clients	70.3	B	87.6	B	64.3	C	19.4	C	4.5	B	9.8	B
Consulting firms	12.1	B	...	D	...	D	0.0	A	0.0	A	0.0	A
Suppliers	85.3	B	75.4	B	55.1	C	21.4	C	7.0	B	0.0	A
Federal government research institutes	4.7	A	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	2.6	A	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	38.8	B	77.5	C	44.7	C	25.5	C	0.0	A	0.0	A
Universities	6.6	B	x	A	x	A	x	A	x	A	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.3

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Multiple Location Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing												
% Having cooperative and collaborative arrangements	34.1	A										
Of these, % having more than one location	71.4	A	100.0	A	60.0	A	50.0	A	30.0	A	0.0	A
Cooperators/Collaborators:												
Competitors	40.0	A	x	A	x	A	x	A	x	A	x	A
Clients	40.0	A	x	A	x	A	x	A	x	A	x	A
Consulting firms	50.0	A	x	A	x	A	x	A	x	A	x	A
Suppliers	90.0	A	88.9	A	55.6	A	33.3	A	33.3	A	0.0	A
Federal government research institutes	10.0	A	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	30.0	A	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	60.0	A	x	A	x	A	x	A	x	A	x	A
Universities	40.0	A	x	A	x	A	x	A	x	A	x	A
Other	10.0	A	x	A	x	A	x	A	x	A	x	A
Chemical Manufacturing (excluding 3254)												
% Having cooperative and collaborative arrangements	39.3	A										
Of these, % having more than one location	50.8	B	80.4	B	81.3	B	57.9	B	23.9	B	15.8	B
Cooperators/Collaborators:												
Competitors	35.9	B	49.5	B	59.8	B	32.3	B	18.1	B	7.9	A
Clients	71.0	B	76.1	B	67.8	B	44.6	B	22.3	B	13.2	B
Consulting firms	40.6	B	77.3	B	45.7	B	41.5	B	0.0	A	0.0	A
Suppliers	64.0	B	78.3	B	74.9	B	41.4	B	14.8	B	8.4	B
Federal government research institutes	34.0	B	85.0	B	22.5	B	7.5	B	0.0	A	0.0	A
Provincial government institutes	22.8	B	100.0	A	22.4	C	11.2	B	0.0	A	0.0	A
Other firms within your corporate group	60.1	B	40.1	B	82.5	B	46.7	B	11.3	B	9.0	B
Universities	51.0	B	66.8	B	49.0	B	28.0	B	0.0	A	0.0	A
Other	5.8	A	x	A	x	A	x	A	x	A	x	A
Pharmaceutical and Medicine Manufacturing (3254)												
% Having cooperative and collaborative arrangements	61.4	B										
Of these, % having more than one location	45.6	B	93.3	A	93.3	A	79.1	B	27.6	B	40.0	B
Cooperators/Collaborators:												
Competitors	53.0	B	53.7	B	60.6	B	73.1	B	12.6	A	25.2	B
Clients	65.5	B	100.0	A	63.9	B	31.9	B	20.4	A	20.4	A
Consulting firms	71.5	B	58.0	B	42.0	B	18.7	A	9.3	A	18.7	A
Suppliers	75.5	B	60.2	B	67.5	B	54.2	B	36.5	B	8.8	A
Federal government research institutes	27.6	B	x	B	x	B	x	B	x	B	x	B
Provincial government institutes	14.2	B	x	A	x	C	x	C	x	C	x	C
Other firms within your corporate group	93.3	A	48.4	B	85.7	A	63.3	B	14.3	A	28.6	B
Universities	46.3	B	x	A	x	B	x	A	x	A	x	B
Other	0.0	A	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.3

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Multiple Location Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Plastics and Rubber Products Manufacturing												
% Having cooperative and collaborative arrangements	33.4	A										
Of these, % having more than one location	42.9	B	80.8	B	77.6	B	28.1	B	19.0	B	12.4	B
Cooperators/Collaborators:												
Competitors	31.9	B	36.2	C	78.5	B	31.6	C	19.4	B	12.1	B
Clients	60.3	B	64.9	B	76.2	B	18.4	B	15.5	B	20.7	B
Consulting firms	38.3	B	77.8	C	68.7	C	16.2	B	0.0	A	14.2	B
Suppliers	79.1	B	80.9	B	72.4	B	20.5	B	6.9	B	6.9	B
Federal government research institutes	20.8	B	100.0	A	15.1	C	0.0	A	0.0	A	0.0	A
Provincial government institutes	16.0	B	x	B	x	C	x	A	x	A	x	A
Other firms within your corporate group	59.2	B	64.2	B	44.3	B	20.0	B	16.3	B	5.3	B
Universities	13.4	B	x	C	x	D	x	A	x	A	x	A
Other	1.5	A	x	A	x	A	x	A	x	A	x	A
Non-Metallic Mineral Products Manufacturing												
% Having cooperative and collaborative arrangements	32.4	A										
Of these, % having more than one location	59.4	B	89.2	B	65.9	B	32.7	B	9.7	B	14.6	B
Cooperators/Collaborators:												
Competitors	41.1	B	72.0	C	55.9	C	11.6	B	0.0	A	25.7	C
Clients	54.5	B	87.1	B	80.1	B	31.0	B	17.7	B	9.1	B
Consulting firms	51.4	B	80.8	B	22.6	B	12.7	B	0.0	A	9.7	B
Suppliers	52.4	B	88.8	B	47.3	C	18.1	B	3.9	A	5.6	B
Federal government research institutes	20.3	B	85.5	C	13.5	B	0.0	A	0.0	A	14.5	C
Provincial government institutes	22.3	B	67.1	C	66.1	C	12.2	B	0.0	A	13.2	C
Other firms within your corporate group	46.9	B	67.1	C	40.0	C	22.1	C	0.0	A	6.3	B
Universities	25.7	B	88.6	C	0.0	A	0.0	A	0.0	A	11.4	C
Other	8.5	B	x	D	x	A	x	D	x	A	x	A
Primary Metal Manufacturing												
% Having cooperative and collaborative arrangements	39.0	A										
Of these, % having more than one location	34.0	B	93.2	B	71.5	B	69.1	B	34.7	B	18.6	B
Cooperators/Collaborators:												
Competitors	52.7	B	47.6	C	69.6	B	70.4	C	30.9	B	18.0	B
Clients	64.7	B	71.6	C	85.0	B	55.7	B	21.1	C	0.0	A
Consulting firms	78.8	B	68.1	B	35.6	B	26.4	B	6.1	A	0.0	A
Suppliers	76.4	B	78.7	B	87.4	B	43.0	B	15.2	B	6.2	A
Federal government research institutes	44.4	B	100.0	A	56.8	B	0.0	A	0.0	A	0.0	A
Provincial government institutes	25.9	B	x	A	x	B	x	A	x	A	x	A
Other firms within your corporate group	59.5	B	73.1	B	57.1	C	37.7	C	0.0	A	15.4	B
Universities	32.8	B	x	A	x	B	x	C	x	B	x	A
Other	6.8	B	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.3

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Multiple Location Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing												
% Having cooperative and collaborative arrangements	30.4	A										
Of these, % having more than one location	39.2	B	85.7	B	58.9	B	12.8	B	21.4	B	11.4	B
Cooperators/Collaborators:												
Competitors	20.2	B	...	D	...	D	...	D	...	D	0.0	A
Clients	66.4	B	85.3	B	52.1	C	7.2	B	15.8	B	12.9	B
Consulting firms	26.7	B	95.7	B	54.7	C	0.0	A	0.0	A	0.0	A
Suppliers	59.3	B	85.6	B	59.7	C	14.8	C	14.8	C	7.6	B
Federal government research institutes	13.9	B	x	A	x	C	x	A	x	A	x	A
Provincial government institutes	10.7	B	x	A	x	C	x	A	x	A	x	A
Other firms within your corporate group	25.9	B	77.1	C	28.1	C	18.4	C	18.4	C	0.0	A
Universities	13.7	B	x	A	x	C	x	A	x	A	x	A
Other	2.8	B	x	A	x	A	x	A	x	A	x	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)												
% Having cooperative and collaborative arrangements	40.0	A										
Of these, % having more than one location	35.6	B	96.6	B	73.9	B	26.2	B	11.2	B	15.6	B
Cooperators/Collaborators:												
Competitors	30.3	B	73.7	B	74.1	B	37.5	C	0.0	A	0.0	A
Clients	66.6	B	79.0	B	94.6	B	34.2	B	16.8	B	11.7	B
Consulting firms	40.5	B	83.2	C	17.3	B	8.4	B	0.0	A	0.0	A
Suppliers	56.0	B	87.1	B	78.8	B	20.0	B	14.0	B	14.0	B
Federal government research institutes	18.5	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	11.2	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	30.0	B	100.0	A	37.8	C	0.0	A	0.0	A	0.0	A
Universities	19.4	B	x	C	x	A	x	C	x	A	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Machinery Manufacturing (excluding 3331 & 3332)												
% Having cooperative and collaborative arrangements	38.7	B										
Of these, % having more than one location	34.7	B	90.2	B	71.3	B	50.1	B	14.5	B	6.9	B
Cooperators/Collaborators:												
Competitors	24.6	B	74.6	C	...	D	...	D	...	D	0.0	A
Clients	71.2	B	71.6	C	55.3	C	33.3	C	13.3	B	5.3	B
Consulting firms	36.4	B	53.0	C	55.6	C	27.6	C	9.6	B	8.6	B
Suppliers	79.7	B	60.6	C	66.2	B	44.1	C	4.2	A	0.0	A
Federal government research institutes	8.8	A	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	11.0	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	51.3	B	90.0	B	50.7	C	18.0	C	0.0	A	0.0	A
Universities	14.7	B	66.1	C	33.9	C	0.0	A	12.6	B	0.0	A
Other	3.5	A	x	D	x	A	x	A	x	D	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.3
Cooperative or Collaborative Arrangements During the Period 1997-1999
Innovators in Manufacturing
Canada, With Whom and Where, Multiple Location Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Computer and Peripheral Equipment Manufacturing												
% Having cooperative and collaborative arrangements	53.1	B										
Of these, % having more than one location	50.4	B	100.0	A	89.9	C	53.6	C	72.5	B	0.0	A
Cooperators/Collaborators:												
Competitors	43.5	B	x	A	x	A	x	A	x	A	x	A
Clients	89.9	C	59.7	B	88.7	C	50.0	B	40.3	B	0.0	A
Consulting firms	72.5	B	88.0	A	50.0	C	26.0	C	14.0	C	0.0	A
Suppliers	100.0	A	81.2	B	71.0	C	36.2	B	53.6	C	0.0	A
Federal government research institutes	18.8	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	18.8	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	63.8	B	56.8	C	84.1	C	43.2	C	29.5	C	0.0	A
Universities	18.8	B	x	A	x	D	x	A	x	D	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Communications Equipment Manufacturing												
% Having cooperative and collaborative arrangements	46.9	B										
Of these, % having more than one location	46.0	B	57.2	B	84.7	A	32.9	B	25.2	B	7.7	A
Cooperators/Collaborators:												
Competitors	23.7	B	x	B	x	B	x	C	x	B	x	A
Clients	74.2	B	31.9	B	89.7	A	31.0	B	10.3	A	10.3	A
Consulting firms	16.0	B	x	A	x	C	x	C	x	A	x	A
Suppliers	39.6	B	x	C	x	B	x	A	x	A	x	A
Federal government research institutes	8.3	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	0.0	A	-	-	-	-	-	-	-	-	-	-
Other firms within your corporate group	25.8	B	x	C	x	A	x	C	x	C	x	A
Universities	16.0	B	x	A	x	A	x	A	x	A	x	A
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Audio and Video Equipment Manufacturing												
% Having cooperative and collaborative arrangements	x	A										
Of these, % having more than one location	x	A	-	-	-	-	-	-	-	-	-	-
Cooperators/Collaborators:												
Competitors	-	-	-	-	-	-	-	-	-	-	-	-
Clients	-	-	-	-	-	-	-	-	-	-	-	-
Consulting firms	-	-	-	-	-	-	-	-	-	-	-	-
Suppliers	-	-	-	-	-	-	-	-	-	-	-	-
Federal government research institutes	-	-	-	-	-	-	-	-	-	-	-	-
Provincial government institutes	-	-	-	-	-	-	-	-	-	-	-	-
Other firms within your corporate group	-	-	-	-	-	-	-	-	-	-	-	-
Universities	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.3

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Multiple Location Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing												
% Having cooperative and collaborative arrangements	56.5	B										
Of these, % having more than one location	62.6	B	93.9	B	87.1	A	81.0	B	61.6	B	19.0	B
Cooperators/Collaborators:												
Competitors	12.5	B	x	D	x	A	x	A	x	A	x	A
Clients	87.1	A	78.2	B	92.6	A	21.8	B	70.7	B	14.4	B
Consulting firms	62.4	B	68.9	B	31.1	B	0.0	A	0.0	A	0.0	A
Suppliers	68.4	B	81.1	B	100.0	A	62.2	B	71.7	B	0.0	A
Federal government research institutes	12.2	B	x	A	x	D	x	A	x	A	x	A
Provincial government institutes	43.0	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	74.5	B	65.8	B	34.2	B	42.9	B	8.7	A	8.7	A
Universities	81.0	B	100.0	A	15.5	B	8.0	A	0.0	A	0.0	A
Other	12.9	A	x	A	x	A	x	A	x	A	x	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media												
% Having cooperative and collaborative arrangements	50.1	B										
Of these, % having more than one location	46.2	B	100.0	A	74.2	B	57.8	B	32.5	B	33.0	B
Cooperators/Collaborators:												
Competitors	46.5	B	44.2	B	63.8	B	64.1	B	34.4	B	0.0	A
Clients	83.4	B	67.4	B	70.1	B	31.5	B	22.6	B	30.1	B
Consulting firms	45.4	B	90.7	B	34.5	C	8.5	B	0.0	A	0.0	A
Suppliers	69.6	B	88.4	B	83.3	B	22.9	B	29.7	C	5.8	B
Federal government research institutes	50.2	B	92.3	B	22.5	B	22.5	B	0.0	A	7.7	B
Provincial government institutes	11.7	B	x	D	x	A	x	A	x	A	x	D
Other firms within your corporate group	50.7	B	67.5	C	70.6	B	40.1	B	0.0	A	0.0	A
Universities	37.9	B	100.0	A	43.9	C	0.0	A	0.0	A	0.0	A
Other	3.6	A	x	A	x	A	x	A	x	A	x	A
Electrical Equipment, Appliance and Component Manufacturing												
% Having cooperative and collaborative arrangements	44.1	A										
Of these, % having more than one location	43.2	B	83.0	B	90.4	B	60.4	B	21.3	B	14.4	B
Cooperators/Collaborators:												
Competitors	26.6	B	25.8	C	89.7	A	31.1	C	15.5	C	15.5	C
Clients	62.4	B	70.6	B	91.2	A	47.5	B	27.6	B	16.5	B
Consulting firms	29.6	B	x	C	x	A	x	C	x	C	x	A
Suppliers	61.7	B	84.7	B	82.2	B	39.9	C	17.9	B	6.7	B
Federal government research institutes	30.7	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	28.3	B	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	42.0	B	54.1	C	73.8	C	77.0	C	6.6	B	0.0	A
Universities	39.3	B	85.8	B	24.7	C	28.1	C	0.0	A	0.0	A
Other	4.1	B	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.3

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Multiple Location Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing												
% Having cooperative and collaborative arrangements	38.0	B										
Of these, % having more than one location	34.0	B	74.0	C	91.1	B	48.4	C	17.0	B	16.9	B
Cooperators/Collaborators:												
Competitors	31.5	C	x	D	x	D	x	C	x	C	x	C
Clients	57.0	C	80.1	C	80.4	B	9.8	B	0.0	A	19.7	C
Consulting firms	28.3	C	x	A	x	C	x	C	x	A	x	A
Suppliers	74.2	B	77.1	C	92.4	B	15.3	B	7.6	B	7.6	B
Federal government research institutes	17.6	B	x	A	x	D	x	A	x	A	x	A
Provincial government institutes	0.0	A	-	-	-	-	-	-	-	-	-	-
Other firms within your corporate group	33.9	C	x	A	x	A	x	C	x	C	x	C
Universities	33.9	C	x	C	x	C	x	A	x	A	x	A
Other	5.7	B	x	A	x	A	x	A	x	A	x	A
Aerospace Product and Parts Manufacturing												
% Having cooperative and collaborative arrangements	50.9	B										
Of these, % having more than one location	67.8	B	88.8	B	89.5	B	60.3	B	23.3	B	5.7	B
Cooperators/Collaborators:												
Competitors	58.1	B	44.6	B	80.7	B	45.9	C	9.7	B	0.0	A
Clients	69.3	B	62.7	B	93.0	A	41.7	B	10.2	B	8.3	B
Consulting firms	33.7	B	x	A	x	C	x	C	x	A	x	A
Suppliers	83.2	B	74.8	B	88.3	A	24.4	B	12.7	B	0.0	A
Federal government research institutes	21.6	B	x	C	x	B	x	C	x	A	x	A
Provincial government institutes	16.1	B	x	D	x	D	x	C	x	A	x	A
Other firms within your corporate group	49.8	B	69.2	B	55.0	C	21.0	B	0.0	A	0.0	A
Universities	21.0	B	x	C	x	C	x	A	x	A	x	A
Other	5.6	B	x	A	x	A	x	A	x	A	x	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment												
% Having cooperative and collaborative arrangements	41.7	B										
Of these, % having more than one location	45.7	C	89.6	C	78.6	C	90.9	A	51.3	C	10.4	C
Cooperators/Collaborators:												
Competitors	71.3	C	72.6	C	57.2	C	85.4	C	44.6	C	0.0	A
Clients	71.3	C	85.4	C	71.9	C	42.8	C	...	D	0.0	A
Consulting firms	60.9	C	x	A	x	C	x	C	x	C	x	A
Suppliers	59.1	C	x	B	x	A	x	B	x	B	x	A
Federal government research institutes	12.2	B	x	A	x	A	x	A	x	A	x	A
Provincial government institutes	23.1	C	x	A	x	A	x	A	x	A	x	A
Other firms within your corporate group	39.1	C	x	A	x	D	x	C	x	D	x	D
Universities	30.5	C	x	A	x	D	x	A	x	A	x	A
Other	9.1	B	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 14.4.3

Cooperative or Collaborative Arrangements During the Period 1997-1999

Innovators in Manufacturing

Canada, With Whom and Where, Multiple Location Firms

	Anywhere		Canada		US		Europe		Pacific Rim		Other	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing												
% Having cooperative and collaborative arrangements	20.3	A										
Of these, % having more than one location	38.8	B	50.9	C	63.6	C	65.3	C	30.7	B	10.9	B
Cooperators/Collaborators:												
Competitors	30.4	B	x	C	x	C	x	C	x	C	x	C
Clients	34.4	C	x	D	x	A	x	D	x	C	x	C
Consulting firms	28.2	C	x	A	x	C	x	D	x	D	x	A
Suppliers	92.2	B	51.4	C	55.3	C	65.4	C	16.0	B	11.8	B
Federal government research institutes	0.0	A	-	-	-	-	-	-	-	-	-	-
Provincial government institutes	0.0	A	-	-	-	-	-	-	-	-	-	-
Other firms within your corporate group	40.8	C	x	C	x	C	x	C	x	C	x	C
Universities	5.0	B	x	A	x	A	x	A	x	A	x	A
Other	4.3	B	x	A	x	A	x	A	x	A	x	A
Miscellaneous Manufacturing												
% Having cooperative and collaborative arrangements	34.3	B										
Of these, % having more than one location	52.1	B	94.0	B	54.3	B	47.0	C	27.0	C	18.6	B
Cooperators/Collaborators:												
Competitors	35.8	C	82.4	C	58.2	C	29.0	C	20.8	C	12.6	C
Clients	53.3	C	77.6	C	66.0	C	51.8	C	11.0	C	26.4	C
Consulting firms	42.0	C	100.0	A	31.3	C	10.8	C	23.3	C	0.0	A
Suppliers	77.5	B	92.5	B	55.0	C	21.8	C	27.3	C	3.0	A
Federal government research institutes	23.1	B	100.0	A	12.7	C	7.6	C	0.0	A	0.0	A
Provincial government institutes	34.4	B	100.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Other firms within your corporate group	62.6	B	83.4	C	34.7	C	12.1	C	13.1	B	0.0	A
Universities	28.1	B	78.8	C	21.2	C	10.8	B	0.0	A	0.0	A
Other	4.7	B	x	D	x	A	x	D	0.0	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

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Interpretative Notes
Tables for Question 15

Data from Question 15 are combined with data from Questions 14 and 16. The tables are located under tab 14 of this binder.

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Interpretative Notes
Tables for Question 16

Data from Question 16 are combined with data from Questions 14 and 15. The tables are located under tab 14 of this binder.

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Interpretative Notes
Tables for Question 17

There are no tabulations for this question. It was a written response and will be analysed later.

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Interpretative Notes
Tables for Question 18

Users should note that if the most important innovation was a world first it was also a first in Canada and a first for the firm. If the most important innovation was not a world first but was a first in Canada, then it was also a first for the firm.

There are two tables for Question 18. Both tables are for innovators in manufacturing. Table 18.1 provides detail of the novelty of the innovation. Table 18.2 tabulates novelty by type of innovator.

The following contains an explanation of how to read Table 18.1, using 'Total Manufacturing Industries', as an example.

In Table 18.1, for 'Total Manufacturing Industries', 88.3% of innovative firms provided a description of their most important new or significantly improved product or process during the period, 1997 – 1999. Of these:

- 12.0% indicated that their most important innovation was a world first;
- 69.9% indicated that it was not a world first;
- 18.0% indicated that they did not know whether it was a world first or not;
- 32.3% indicated that it was a first in Canada;
- ...and so on...

The following contains an explanation of how to read Table 18.2, using 'Total Manufacturing Industries', as an example:

In Table 18.2, for 'Total Manufacturing Industries', 88.3% of innovative firms provided a description of their most important new or significantly improved product or process during the period, 1997 – 1999. Of these:

- 12.0% indicated that their most important innovation was a world first;
- 32.3% indicated that it was a first in Canada; and
- 83.2% indicated that it was a first for the firm.

Also, 90.2% of both product and process innovators provided a description of their most important new or significantly improved product or process during the period, 1997 – 1999. Of these:

- 12.9% indicated that their most important innovation was a world first;
- 36.1% indicated that it was a first in Canada; and
- 85.9% indicated that it was a first for the firm.

Also, 83.2% of product only innovators provided a description of their most important new or significantly improved product or process during the period, 1997 – 1999. Of these:

- 15.2% indicated that their most important innovation was a world first;

- 33.0% indicated that it was a first in Canada; and
- 79.3% indicated that it was a first for the firm.

Finally, 86.3% of process only innovators provided a description of their most important new or significantly improved product or process during the period, 1997 – 1999. Of these:

- 4.3% indicated that their most important innovation was a world first;
- 14.0% indicated that it was a first in Canada; and
- 75.4% indicated that it was a first for the firm.

Table 18.1

Most Important New or Significantly Improved Product or Process During the Period 1997-1999

Industry by Type of Novelty

Canada, Innovators in Manufacturing

			Yes		No		Do Not Know	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries								
Described the most important innovation	88.3	A						
Of these, % that were:								
A world first			12.0	A	69.9	A	18.0	A
A first in Canada			32.3	A	54.1	A	13.6	A
A first for the firm			83.2	A	13.5	A	3.3	A
Food Manufacturing								
Described the most important innovation	87.9	A						
Of these, % that were:								
A world first			5.6	A	76.2	A	18.3	A
A first in Canada			27.6	A	58.1	A	14.2	A
A first for the firm			81.9	A	14.9	A	3.2	A
Beverage and Tobacco Product Manufacturing								
Described the most important innovation	88.1	A						
Of these, % that were:								
A world first			9.8	A	74.1	A	16.2	A
A first in Canada			30.4	A	60.0	A	9.6	A
A first for the firm			80.8	A	17.4	A	1.7	A
Textile Mills								
Described the most important innovation	87.3	A						
Of these, % that were:								
A world first			13.5	A	59.2	A	27.3	A
A first in Canada			41.2	A	41.6	A	17.2	A
A first for the firm			91.7	A	8.3	A	0.0	A
Textile Product Mills								
Described the most important innovation	86.2	A						
Of these, % that were:								
A world first			18.5	B	66.0	B	15.5	B
A first in Canada			43.2	B	52.5	B	4.3	A
A first for the firm			78.2	B	7.1	A	14.7	B
Clothing Manufacturing								
Described the most important innovation	76.8	A						
Of these, % that were:								
A world first			6.0	A	78.3	A	15.7	A
A first in Canada			16.1	A	68.1	A	15.8	A
A first for the firm			76.4	A	17.5	A	6.1	A
Leather and Allied Product Manufacturing								
Described the most important innovation	83.2	B						
Of these, % that were:								
A world first			13.0	B	66.1	B	20.9	B
A first in Canada			29.2	B	58.1	B	12.6	B
A first for the firm			71.5	B	22.7	B	5.8	A
Sawmills and Wood Preservation								
Described the most important innovation	89.7	A						
Of these, % that were:								
A world first			4.1	A	85.4	A	10.5	A
A first in Canada			10.3	A	82.1	A	7.5	A
A first for the firm			78.0	A	17.3	A	4.6	A
Veneer, Plywood and Engineered Wood Product Manufacturing								
Described the most important innovation	96.9	A						
Of these, % that were:								
A world first			19.3	B	53.7	B	27.0	B
A first in Canada			42.6	B	42.9	B	14.6	A
A first for the firm			84.9	A	11.9	A	3.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 18.1

Most Important New or Significantly Improved Product or Process During the Period 1997-1999

Industry by Type of Novelty

Canada, Innovators in Manufacturing

			Yes		No		Do Not Know	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Other Wood Product Manufacturing								
Described the most important innovation	87.4	A						
Of these, % that were:								
A world first			7.5	A	80.7	A	11.9	A
A first in Canada			21.5	A	68.5	B	9.9	A
A first for the firm			78.8	A	18.9	A	2.3	A
Paper Manufacturing								
Described the most important innovation	91.7	A						
Of these, % that were:								
A world first			6.6	A	77.4	A	16.0	A
A first in Canada			31.6	A	55.3	A	13.1	A
A first for the firm			79.9	A	16.5	A	3.5	A
Printing and Related Support Activities								
Described the most important innovation	90.3	A						
Of these, % that were:								
A world first			3.9	A	83.2	A	12.9	A
A first in Canada			18.8	A	70.4	B	10.8	A
A first for the firm			84.0	A	13.2	A	2.7	A
Petroleum and Coal Products Manufacturing								
Described the most important innovation	85.4	A						
Of these, % that were:								
A world first			11.4	A	60.0	A	28.6	A
A first in Canada			48.6	A	34.3	A	17.1	A
A first for the firm			85.7	A	14.3	A	0.0	A
Chemical Manufacturing (excluding 3254)								
Described the most important innovation	91.6	A						
Of these, % that were:								
A world first			15.2	A	65.6	A	19.3	A
A first in Canada			37.5	A	48.4	A	14.1	A
A first for the firm			79.9	A	16.6	A	3.5	A
Pharmaceutical and Medicine Manufacturing (3254)								
Described the most important innovation	80.8	A						
Of these, % that were:								
A world first			14.5	A	66.5	B	19.0	A
A first in Canada			38.2	A	47.4	B	14.4	A
A first for the firm			80.6	A	17.1	A	2.3	A
Plastics and Rubber Products Manufacturing								
Described the most important innovation	91.7	A						
Of these, % that were:								
A world first			14.6	A	61.0	A	24.5	A
A first in Canada			40.1	A	44.6	A	15.3	A
A first for the firm			86.0	A	12.1	A	2.0	A
Non-Metallic Mineral Products Manufacturing								
Described the most important innovation	85.3	A						
Of these, % that were:								
A world first			12.2	A	66.2	A	21.7	A
A first in Canada			34.0	A	51.9	A	14.1	A
A first for the firm			83.0	A	14.2	A	2.8	A
Primary Metal Manufacturing								
Described the most important innovation	88.5	A						
Of these, % that were:								
A world first			7.5	A	67.1	A	25.4	A
A first in Canada			29.0	A	48.5	A	22.6	A
A first for the firm			83.8	A	14.8	A	1.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 18.1

Most Important New or Significantly Improved Product or Process During the Period 1997-1999

Industry by Type of Novelty

Canada, Innovators in Manufacturing

			Yes		No		Do Not Know	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing								
Described the most important innovation	91.8	A						
Of these, % that were:								
A world first			8.8	A	70.3	A	20.9	A
A first in Canada			26.4	A	57.0	A	16.6	A
A first for the firm			83.8	A	13.2	A	2.9	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)								
Described the most important innovation	85.8	A						
Of these, % that were:								
A world first			29.5	A	52.3	A	18.2	A
A first in Canada			48.6	A	39.1	A	12.3	A
A first for the firm			93.2	A	6.8	A	0.0	A
Machinery Manufacturing (excluding 3331 & 3332)								
Described the most important innovation	88.2	A						
Of these, % that were:								
A world first			16.3	A	67.4	B	16.3	A
A first in Canada			37.6	B	46.1	B	16.3	A
A first for the firm			85.4	A	12.5	A	2.1	A
Computer and Peripheral Equipment Manufacturing								
Described the most important innovation	91.9	B						
Of these, % that were:								
A world first			28.7	B	57.4	B	13.9	A
A first in Canada			51.9	B	34.2	B	13.9	A
A first for the firm			85.2	B	14.8	B	0.0	A
Communications Equipment Manufacturing								
Described the most important innovation	89.0	A						
Of these, % that were:								
A world first			29.8	B	56.0	B	14.2	B
A first in Canada			48.3	B	39.6	B	12.2	B
A first for the firm			84.8	B	6.8	A	8.4	A
Audio and Video Equipment Manufacturing								
Described the most important innovation	x	A						
Of these, % that were:								
A world first			x	A	x	A	x	A
A first in Canada			x	A	x	A	x	A
A first for the firm			x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing								
Described the most important innovation	83.7	B						
Of these, % that were:								
A world first			18.3	B	76.4	B	5.3	A
A first in Canada			49.0	B	51.0	B	0.0	A
A first for the firm			81.9	B	13.0	B	5.1	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media								
Described the most important innovation	91.5	A						
Of these, % that were:								
A world first			33.7	B	52.7	B	13.6	A
A first in Canada			49.8	B	38.2	B	11.9	A
A first for the firm			81.9	A	12.0	A	6.2	A
Electrical Equipment, Appliance and Component Manufacturing								
Described the most important innovation	89.0	A						
Of these, % that were:								
A world first			18.3	A	58.4	B	23.3	A
A first in Canada			55.0	A	32.5	A	12.5	A
A first for the firm			86.7	A	10.2	A	3.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 18.1

Most Important New or Significantly Improved Product or Process During the Period 1997-1999

Industry by Type of Novelty

Canada, Innovators in Manufacturing

			Yes		No		Do Not Know	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing								
Described the most important innovation	89.5	A						
Of these, % that were:								
A world first			13.8	A	70.0	B	16.1	A
A first in Canada			38.5	B	53.0	B	8.6	A
A first for the firm			82.0	A	12.9	A	5.1	A
Aerospace Product and Parts Manufacturing								
Described the most important innovation	88.0	B						
Of these, % that were:								
A world first			19.0	B	77.2	B	3.8	A
A first in Canada			31.4	B	56.8	B	11.9	A
A first for the firm			72.6	B	25.5	B	1.9	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment								
Described the most important innovation	96.5	A						
Of these, % that were:								
A world first			11.1	B	60.7	B	28.2	B
A first in Canada			43.3	B	45.7	B	11.1	B
A first for the firm			84.7	B	15.3	B	0.0	A
Furniture and Related Products Manufacturing								
Described the most important innovation	83.4	A						
Of these, % that were:								
A world first			8.0	A	76.8	A	15.2	A
A first in Canada			24.1	A	63.2	B	12.7	A
A first for the firm			87.5	A	10.1	A	2.4	A
Miscellaneous Manufacturing								
Described the most important innovation	84.8	A						
Of these, % that were:								
A world first			21.2	B	64.0	B	14.8	A
A first in Canada			44.3	B	44.2	B	11.5	A
A first for the firm			84.8	A	8.6	A	6.5	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 18.2
Most Important New or Significantly Improved Product or Process During the Period 1997-1999
Industry by Type of Novelty
Canada, Innovators in Manufacturing

	Innovators		Both Product and Process Innovators		Only Product Innovators		Only Process Innovators	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries								
Described the most important innovation	88.3	A	90.2	A	83.2	A	86.3	A
Of these, % that reported it was:								
A world first	12.0	A	12.9	A	15.2	A	4.3	A
A first in Canada	32.3	A	36.1	A	33.0	A	14.0	A
A first for the firm	83.2	A	85.9	A	79.3	A	75.4	A
Food Manufacturing								
Described the most important innovation	87.9	A	89.7	A	80.3	B	87.9	B
Of these, % that reported it was:								
A world first	5.6	A	5.6	A	6.7	A	3.0	A
A first in Canada	27.6	A	32.4	A	16.1	B	8.1	B
A first for the firm	81.9	A	83.4	A	77.0	B	78.2	B
Beverage and Tobacco Product Manufacturing								
Described the most important innovation	88.1	A	85.9	A	92.1	B	92.3	A
Of these, % that reported it was:								
A world first	9.8	A	12.9	A	9.0	B	0.0	A
A first in Canada	30.4	A	34.9	B	28.6	B	16.8	B
A first for the firm	80.8	A	89.8	A	80.4	B	51.0	B
Textile Mills								
Described the most important innovation	87.3	A	93.0	A	64.9	B	79.9	B
Of these, % that reported it was:								
A world first	13.5	A	16.0	A	8.1	B	0.0	A
A first in Canada	41.2	A	46.5	A	8.1	B	35.6	B
A first for the firm	91.7	A	93.8	A	77.0	B	91.4	B
Textile Product Mills								
Described the most important innovation	86.2	A	91.1	A	72.5	B	100.0	A
Of these, % that reported it was:								
A world first	18.5	B	22.8	B	5.1	B	x	A
A first in Canada	43.2	B	49.8	B	22.9	B	x	A
A first for the firm	78.2	B	84.0	B	57.8	C	x	A
Clothing Manufacturing								
Described the most important innovation	78.8	A	79.8	A	69.8	B	85.0	B
Of these, % that reported it was:								
A world first	6.0	A	5.8	A	1.9	A	9.9	A
A first in Canada	16.1	A	18.1	A	13.4	B	13.2	B
A first for the firm	76.4	A	72.8	B	76.5	B	85.3	B
Leather and Allied Product Manufacturing								
Described the most important innovation	83.2	B	80.5	B	92.1	B	-	-
Of these, % that reported it was:								
A world first	13.0	B	8.7	B	25.7	C	-	-
A first in Canada	29.2	B	24.6	B	42.9	C	-	-
A first for the firm	71.5	B	61.8	B	100.0	A	-	-
Sawmills and Wood Preservation								
Described the most important innovation	89.7	A	90.3	A	90.5	A	88.2	B
Of these, % that reported it was:								
A world first	4.1	A	7.0	A	0.0	A	0.0	A
A first in Canada	10.3	A	14.5	A	10.0	B	2.3	A
A first for the firm	78.0	A	84.6	A	81.8	B	63.6	B
Veneer, Plywood and Engineered Wood Product Manufacturing								
Described the most important innovation	96.9	A	97.7	A	87.7	B	100.0	A
Of these, % that reported it was:								
A world first	19.3	B	27.8	B	0.0	A	10.2	B
A first in Canada	42.6	B	57.0	B	48.6	C	10.2	B
A first for the firm	84.9	A	91.9	B	88.1	B	69.2	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 18.2

Most Important New or Significantly Improved Product or Process During the Period 1997-1999

Industry by Type of Novelty

Canada, Innovators in Manufacturing

	Innovators		Both Product and Process Innovators		Only Product Innovators		Only Process Innovators	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Other Wood Product Manufacturing								
Described the most important innovation	87.4	A	91.4	A	79.4	B	81.7	B
Of these, % that reported it was:								
A world first	7.5	A	5.0	A	12.2	B	12.0	B
A first in Canada	21.5	A	18.8	B	25.3	B	27.7	B
A first for the firm	78.8	A	83.5	B	62.3	B	75.1	B
Paper Manufacturing								
Described the most important innovation	91.7	A	89.1	A	95.6	B	96.1	A
Of these, % that reported it was:								
A world first	6.6	A	8.5	A	2.9	A	4.3	A
A first in Canada	31.6	A	36.6	A	41.8	B	12.5	A
A first for the firm	79.9	A	84.7	A	77.0	B	70.1	B
Printing and Related Support Activities								
Described the most important innovation	90.3	A	90.6	A	93.2	B	88.2	B
Of these, % that reported it was:								
A world first	3.9	A	4.5	A	9.7	B	0.0	A
A first in Canada	18.8	A	22.2	B	28.6	C	4.8	B
A first for the firm	84.0	A	86.4	B	68.3	C	83.0	B
Petroleum and Coal Products Manufacturing								
Described the most important innovation	85.4	A	92.9	A	71.4	A	88.7	A
Of these, % that reported it was:								
A world first	11.4	A	11.5	A	x	A	x	A
A first in Canada	48.6	A	50.0	A	x	A	x	A
A first for the firm	85.7	A	84.6	A	x	A	x	A
Chemical Manufacturing (excluding 3254)								
Described the most important innovation	91.6	A	91.5	A	92.7	A	89.8	B
Of these, % that reported it was:								
A world first	15.2	A	15.5	A	16.1	B	10.7	B
A first in Canada	37.5	A	42.0	A	31.6	B	27.3	B
A first for the firm	79.9	A	83.6	A	79.7	B	59.0	B
Pharmaceutical and Medicine Manufacturing (3254)								
Described the most important innovation	80.8	A	84.4	B	68.5	B	100.0	A
Of these, % that reported it was:								
A world first	14.5	A	8.2	A	34.6	B	x	A
A first in Canada	38.2	A	39.9	B	51.4	B	x	A
A first for the firm	80.6	A	87.5	B	91.6	A	x	C
Plastics and Rubber Products Manufacturing								
Described the most important innovation	91.7	A	92.6	A	93.4	B	81.6	B
Of these, % that reported it was:								
A world first	14.6	A	14.4	A	19.4	B	6.7	B
A first in Canada	40.1	A	39.8	A	55.8	B	14.1	B
A first for the firm	86.0	A	90.5	A	75.7	B	62.7	C
Non-Metallic Mineral Products Manufacturing								
Described the most important innovation	85.3	A	89.3	A	81.6	B	75.8	B
Of these, % that reported it was:								
A world first	12.2	A	16.6	A	0.0	A	15.7	B
A first in Canada	34.0	A	41.7	B	14.0	B	38.1	B
A first for the firm	83.0	A	85.2	A	81.9	B	74.6	B
Primary Metal Manufacturing								
Described the most important innovation	88.5	A	91.8	A	82.7	B	81.9	B
Of these, % that reported it was:								
A world first	7.5	A	8.9	A	0.0	A	6.7	A
A first in Canada	29.0	A	31.8	A	27.1	B	20.9	B
A first for the firm	83.8	A	84.1	A	79.4	B	84.9	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 18.2

Most Important New or Significantly Improved Product or Process During the Period 1997-1999

Industry by Type of Novelty

Canada, Innovators in Manufacturing

	Innovators		Both Product and Process Innovators		Only Product Innovators		Only Process Innovators	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing								
Described the most important innovation	91.8	A	92.5	A	87.8	B	92.3	B
Of these, % that reported it was:								
A world first	8.8	A	9.6	A	14.6	B	2.9	A
A first in Canada	26.4	A	30.9	B	34.7	B	8.2	B
A first for the firm	83.8	A	86.2	A	82.0	B	78.0	B
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)								
Described the most important innovation	85.8	A	86.8	A	89.0	A	67.7	B
Of these, % that reported it was:								
A world first	29.5	A	27.6	A	38.1	B	9.1	B
A first in Canada	48.6	A	49.1	B	54.7	B	17.6	B
A first for the firm	93.2	A	95.0	A	87.7	A	100.0	A
Machinery Manufacturing (excluding 3331 & 3332)								
Described the most important innovation	88.2	A	91.0	A	83.4	B	81.5	B
Of these, % that reported it was:								
A world first	16.3	A	18.8	A	18.8	B	0.0	A
A first in Canada	37.6	B	44.0	B	35.1	B	7.8	B
A first for the firm	85.4	A	89.3	A	87.0	B	63.6	C
Computer and Peripheral Equipment Manufacturing								
Described the most important innovation	91.9	B	91.5	B	92.4	B	-	-
Of these, % that reported it was:								
A world first	28.7	B	33.6	B	20.9	B	-	-
A first in Canada	51.9	B	67.1	B	27.5	B	-	-
A first for the firm	85.2	B	90.4	B	76.9	B	-	-
Communications Equipment Manufacturing								
Described the most important innovation	89.0	A	91.8	A	91.6	A	50.0	C
Of these, % that reported it was:								
A world first	29.8	B	33.6	B	11.8	B	x	A
A first in Canada	48.3	B	49.1	B	44.8	C	x	A
A first for the firm	84.8	B	89.0	A	75.5	C	x	A
Audio and Video Equipment Manufacturing								
Described the most important innovation	x	A	x	A	x	A	-	-
Of these, % that reported it was:								
A world first	x	A	x	A	x	A	-	-
A first in Canada	x	A	x	A	x	A	-	-
A first for the firm	x	A	x	A	x	A	-	-
Semiconductor and Other Electronic Equipment Manufacturing								
Described the most important innovation	83.7	B	89.0	B	28.6	C	84.1	B
Of these, % that reported it was:								
A world first	18.3	B	22.1	B	x	A	x	A
A first in Canada	49.0	B	59.0	B	x	A	x	A
A first for the firm	81.9	B	81.2	B	x	A	x	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media								
Described the most important innovation	91.5	A	93.2	B	87.6	B	100.0	A
Of these, % that reported it was:								
A world first	33.7	B	34.8	B	38.5	B	x	A
A first in Canada	49.8	B	52.7	B	55.1	B	x	A
A first for the firm	81.9	A	87.1	B	78.4	B	x	C
Electrical Equipment, Appliance and Component Manufacturing								
Described the most important innovation	89.0	A	91.8	A	78.8	B	80.2	B
Of these, % that reported it was:								
A world first	18.3	A	19.2	A	15.7	B	11.0	A
A first in Canada	55.0	A	59.1	B	44.4	B	22.1	B
A first for the firm	86.7	A	88.5	A	76.2	B	88.8	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 18.2

Most Important New or Significantly Improved Product or Process During the Period 1997-1999

Industry by Type of Novelty

Canada, Innovators in Manufacturing

	Innovators		Both Product and Process Innovators		Only Product Innovators		Only Process Innovators	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing								
Described the most important innovation	89.5	A	93.2	A	76.0	B	88.2	B
Of these, % that reported it was:								
A world first	13.8	A	14.7	A	20.3	B	0.0	A
A first in Canada	38.5	B	43.2	B	34.8	B	13.9	B
A first for the firm	82.0	A	84.7	A	84.0	B	63.3	C
Aerospace Product and Parts Manufacturing								
Described the most important innovation	88.0	B	85.3	B	100.0	A	89.5	B
Of these, % that reported it was:								
A world first	19.0	B	28.5	B	x	A	0.0	A
A first in Canada	31.4	B	38.0	B	x	C	11.5	B
A first for the firm	72.6	B	80.8	B	x	C	56.5	C
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment								
Described the most important innovation	96.5	A	97.6	A	100.0	A	81.1	C
Of these, % that reported it was:								
A world first	11.1	B	12.5	B	x	A	x	A
A first in Canada	43.3	B	41.8	B	x	C	x	D
A first for the firm	84.7	B	79.4	B	x	A	x	A
Furniture and Related Products Manufacturing								
Described the most important innovation	83.4	A	85.6	A	74.7	B	82.6	B
Of these, % that reported it was:								
A world first	8.0	A	5.8	A	24.4	B	4.3	B
A first in Canada	24.1	A	23.1	B	34.9	B	20.0	B
A first for the firm	87.5	A	89.8	A	83.6	B	81.9	B
Miscellaneous Manufacturing								
Described the most important innovation	84.8	A	90.0	A	69.3	B	68.9	C
Of these, % that reported it was:								
A world first	21.2	B	20.9	B	29.4	B	0.0	A
A first in Canada	44.3	B	43.6	B	...	C	...	D
A first for the firm	84.8	A	85.3	B	77.4	B	100.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 19

There is one table for Question 19. It is for innovators in manufacturing.

The following contains an explanation of how to read Table 19.1 using 'Total Manufacturing Industries' as an example.

In Table19.1, for 'Total Manufacturing Industries', 88.3% of innovative firms provided a description of their most important new or significantly improved product or process during the period, 1997 – 1999. Of these:

- 19.4% indicated that it took 6 months or less from the time of initial idea generation to the implementation of the most important new or significantly improved product or process;
- 29.1% indicated that it took 7-12 months;
- 9.6% indicated that it took 13 to 18 months;
- 20.7% indicated that it took 19 to 24 months;
- 12.3% indicated that it took 25 to 36 months;
- 3.2% indicated that it took 37 to 48 months;
- 2.9% indicated that it took 49 to 60 months;
- 2.6% indicated that it took more than 61 months; and
- 0.2% indicated that they did not know how long it took from the time of initial idea generation to the implementation of the most important new or significantly improved product or process.

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Table 19.1

Most Important New or Significantly Improved Product or Process During the Period 1997-1999

Time from Initial Idea Generation to Implementation

Canada, Innovators in Manufacturing

	Firms That Described the Most Important Innovation		Of These, % That Took the Following Number of Months									
			6 or less		7 to 12		13 to 18		19 to 24		25 to 36	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	88.3	A	19.4	A	29.1	A	9.6	A	20.7	A	12.3	A
Food Manufacturing	87.9	A	26.6	A	33.9	A	7.9	A	18.7	A	7.4	A
Beverage and Tobacco Product Manufacturing	88.1	A	13.2	A	35.5	A	21.7	A	24.6	A	1.7	A
Textile Mills	87.3	A	15.5	A	29.3	A	12.5	A	26.4	A	11.3	A
Textile Product Mills	86.2	A	33.8	B	21.3	B	7.6	A	14.5	B	15.8	A
Clothing Manufacturing	78.8	A	32.7	A	36.7	A	2.7	A	15.0	A	8.1	A
Leather and Allied Product Manufacturing	83.2	B	37.2	B	38.3	B	2.2	A	7.9	B	2.2	A
Sawmills and Wood Preservation	89.7	A	21.5	A	28.1	A	11.6	A	19.2	A	9.3	A
Veneer, Plywood and Engineered Wood Product Manufacturing	96.9	A	5.1	A	27.3	B	10.7	A	33.8	B	15.4	A
Other Wood Product Manufacturing	87.4	A	29.1	A	24.1	A	8.6	A	13.3	A	20.5	A
Paper Manufacturing	91.7	A	15.7	A	24.7	A	9.6	A	24.6	A	14.2	A
Printing and Related Support Activities	90.3	A	20.7	A	32.2	B	11.9	A	18.8	A	10.8	A
Petroleum and Coal Products Manufacturing	85.4	A	11.4	A	17.1	A	11.4	A	34.3	A	14.3	A
Chemical Manufacturing (excluding 3254)	91.6	A	9.1	A	24.5	A	4.5	A	26.3	A	17.6	A
Pharmaceutical and Medicine Manufacturing (3254)	80.8	A	7.5	A	22.2	B	4.6	A	18.6	A	6.9	A
Plastics and Rubber Products Manufacturing	91.7	A	11.0	A	30.9	A	7.0	A	25.3	A	15.0	A
Non-Metallic Mineral Products Manufacturing	85.3	A	20.5	A	32.1	A	8.8	A	17.6	A	12.5	A
Primary Metal Manufacturing	88.5	A	22.2	A	24.8	A	13.8	A	16.0	A	7.3	A
Fabricated Metal Product Manufacturing	91.8	A	18.9	A	27.5	A	11.3	A	20.9	A	12.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	85.8	A	12.9	A	20.6	A	13.6	A	27.8	A	14.1	A
Machinery Manufacturing (excluding 3331 & 3332)	86.2	A	13.7	A	31.1	A	12.3	A	24.6	A	12.0	A
Computer and Peripheral Equipment Manufacturing	91.9	B	28.1	B	17.1	B	10.1	A	24.5	B	12.7	A
Communications Equipment Manufacturing	89.0	A	5.6	A	35.1	B	7.6	A	18.3	A	22.2	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	83.7	B	19.3	A	24.1	B	10.6	A	22.3	A	15.7	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	91.5	A	17.9	A	14.1	A	10.0	A	21.9	B	21.4	B
Electrical Equipment, Appliance and Component Manufacturing	89.0	A	14.3	A	30.6	A	11.4	A	18.9	A	14.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	89.5	A	14.3	A	32.7	B	8.2	A	16.5	A	21.3	A
Aerospace Product and Parts Manufacturing	88.0	B	13.2	A	19.9	B	4.7	A	20.1	B	12.0	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	96.5	A	16.7	B	27.4	B	20.9	B	21.8	B	7.5	B
Furniture and Related Products Manufacturing	83.4	A	27.4	A	32.3	A	10.5	A	15.3	A	7.7	A
Miscellaneous Manufacturing	84.8	A	23.2	B	27.2	B	8.8	A	22.2	B	10.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 19.1

Most Important New or Significantly Improved Product or Process During the Period 1997-1999

Time from Initial Idea Generation to Implementation

Canada, Innovators in Manufacturing

	Firms That Described the Most Important Innovation		Of These, % That Took the Following Number of Months							
			37 to 48		49 to 60		more than 61		Do Not Know	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	88.3	A	3.2	A	2.9	A	2.6	A	0.2	A
Food Manufacturing	87.9	A	1.6	A	2.4	A	1.4	A	0.2	A
Beverage and Tobacco Product Manufacturing	88.1	A	0.0	A	0.0	A	3.3	A	0.0	A
Textile Mills	87.3	A	1.6	A	1.6	A	1.7	A	0.0	A
Textile Product Mills	86.2	A	4.0	A	0.0	A	1.2	A	1.9	A
Clothing Manufacturing	78.8	A	4.0	A	0.4	A	0.4	A	0.0	A
Leather and Allied Product Manufacturing	83.2	B	12.3	B	0.0	A	0.0	A	0.0	A
Sawmills and Wood Preservation	89.7	A	2.6	A	4.6	A	3.1	A	0.0	A
Veneer, Plywood and Engineered Wood Product Manufacturing	96.9	A	1.7	A	4.5	A	1.5	A	0.0	A
Other Wood Product Manufacturing	87.4	A	2.1	A	1.2	A	1.1	A	0.0	A
Paper Manufacturing	91.7	A	3.5	A	4.8	A	3.0	A	0.0	A
Printing and Related Support Activities	90.3	A	1.7	A	1.9	A	2.0	A	0.0	A
Petroleum and Coal Products Manufacturing	85.4	A	5.7	A	2.9	A	2.9	A	0.0	A
Chemical Manufacturing (excluding 3254)	91.6	A	4.1	A	8.5	A	5.4	A	0.0	A
Pharmaceutical and Medicine Manufacturing (3254)	80.8	A	4.6	A	14.8	A	20.7	A	0.0	A
Plastics and Rubber Products Manufacturing	91.7	A	6.5	A	1.0	A	3.3	A	0.0	A
Non-Metallic Mineral Products Manufacturing	85.3	A	1.6	A	4.5	A	1.7	A	0.6	A
Primary Metal Manufacturing	88.5	A	4.8	A	5.4	A	3.2	A	2.5	A
Fabricated Metal Product Manufacturing	91.8	A	2.1	A	2.6	A	3.5	A	0.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	85.8	A	3.6	A	2.4	A	5.1	A	0.0	A
Machinery Manufacturing (excluding 3331 & 3332)	88.2	A	2.0	A	3.1	A	1.2	A	0.0	A
Computer and Peripheral Equipment Manufacturing	91.9	B	5.1	A	2.5	A	0.0	A	0.0	A
Communications Equipment Manufacturing	89.0	A	9.2	B	2.0	A	0.0	A	0.0	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	83.7	B	0.0	A	8.0	A	0.0	A	0.0	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	91.5	A	10.8	A	1.0	A	2.8	A	0.0	A
Electrical Equipment, Appliance and Component Manufacturing	89.0	A	6.5	A	2.3	A	1.5	A	0.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	89.5	A	4.3	A	1.3	A	1.4	A	0.0	A
Aerospace Product and Parts Manufacturing	88.0	B	9.1	A	8.1	B	13.0	B	0.0	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	96.5	A	1.8	A	2.1	A	1.8	A	0.0	A
Furniture and Related Products Manufacturing	83.4	A	0.0	A	4.5	A	2.3	A	0.0	A
Miscellaneous Manufacturing	84.8	A	3.7	A	1.3	A	3.6	A	0.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 20

There is one table for Question 20. It is for innovators in manufacturing.

The following contains an explanation of how to read Table 20.1 using 'Total Manufacturing Industries' as an example.

In Table 20.1, for 'Total Manufacturing Industries', 88.3% of innovative firms provided a description of their most important new or significantly improved product or process during the period, 1997 – 1999. Of these:

- 51.5% indicated that the most important innovation involved the use of new materials;
- 44.8% indicated that it did not involve the use of new materials; and
- 3.7% did not know if it involved the use of new materials.

Also, of the 88.3% of firms who provided a description:

- 77.4% indicated that it involved an investment in machinery or equipment;
- 20.4% indicated that it did not involve an investment in machinery or equipment; and
- 2.2% did not know if it involved an investment in machinery or equipment.

Finally, of the 88.3% of firms who provided a description:

- 27.1% indicated that it involved new software developed by or specifically for the firm; and
- 66.4% indicated that it did not; and
- 6.5% did not know if it involved new software developed by or specifically for the firm.

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Table 20.1
Most Important New or Significantly Improved Product or Process During the Period 1997-1999
Industry by Factors of Involvement
Canada, Innovators in Manufacturing

			Yes		No		Do Not Know	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries								
Firms that described the most important innovation	88.3	A						
Of these, % that involved:								
The use of new materials			51.5	A	44.8	A	3.7	A
An investment in machinery or equipment			77.4	A	20.4	A	2.2	A
New software developed by or specifically for the firm			27.1	A	66.4	A	6.5	A
Food Manufacturing								
Firms that described the most important innovation	87.9	A						
Of these, % that involved:								
The use of new materials			57.9	A	39.6	A	2.5	A
An investment in machinery or equipment			83.1	A	15.3	A	1.6	A
New software developed by or specifically for the firm			15.8	A	79.7	A	4.4	A
Beverage and Tobacco Product Manufacturing								
Firms that described the most important innovation	88.1	A						
Of these, % that involved:								
The use of new materials			64.4	A	33.9	A	1.7	A
An investment in machinery or equipment			78.7	A	19.6	A	1.7	A
New software developed by or specifically for the firm			17.8	A	70.5	A	11.8	A
Textile Mills								
Firms that described the most important innovation	87.3	A						
Of these, % that involved:								
The use of new materials			59.1	A	35.9	A	5.1	A
An investment in machinery or equipment			81.4	A	17.8	A	0.9	A
New software developed by or specifically for the firm			18.9	A	75.2	A	5.9	A
Textile Product Mills								
Firms that described the most important innovation	86.2	A						
Of these, % that involved:								
The use of new materials			60.6	B	36.1	B	3.3	A
An investment in machinery or equipment			71.3	B	22.6	B	6.1	A
New software developed by or specifically for the firm			26.9	B	64.8	B	8.3	A
Clothing Manufacturing								
Firms that described the most important innovation	78.8	A						
Of these, % that involved:								
The use of new materials			55.6	A	42.6	A	1.9	A
An investment in machinery or equipment			69.4	A	28.0	A	2.5	A
New software developed by or specifically for the firm			29.0	A	68.8	A	2.2	A
Leather and Allied Product Manufacturing								
Firms that described the most important innovation	83.2	B						
Of these, % that involved:								
The use of new materials			79.1	B	20.9	B	0.0	A
An investment in machinery or equipment			72.6	B	23.5	B	4.0	A
New software developed by or specifically for the firm			12.6	B	74.7	B	12.6	B
Sawmills and Wood Preservation								
Firms that described the most important innovation	89.7	A						
Of these, % that involved:								
The use of new materials			30.0	A	64.7	A	5.3	A
An investment in machinery or equipment			91.6	A	7.8	A	0.6	A
New software developed by or specifically for the firm			43.0	A	53.6	A	3.4	A
Veneer, Plywood and Engineered Wood Product Manufacturing								
Firms that described the most important innovation	96.9	A						
Of these, % that involved:								
The use of new materials			40.5	B	53.6	B	5.9	A
An investment in machinery or equipment			74.6	B	25.4	B	0.0	A
New software developed by or specifically for the firm			37.6	B	56.2	B	6.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 20.1
Most Important New or Significantly Improved Product or Process During the Period 1997-1999
Industry by Factors of Involvement
Canada, Innovators in Manufacturing

			Yes		No		Do Not Know	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Other Wood Product Manufacturing								
Firms that described the most important innovation	87.4	A						
Of these, % that involved:								
The use of new materials			50.9	B	43.9	B	5.2	A
An investment in machinery or equipment			77.4	A	21.0	A	1.6	A
New software developed by or specifically for the firm			25.6	A	68.0	B	6.4	A
Paper Manufacturing								
Firms that described the most important innovation	91.7	A						
Of these, % that involved:								
The use of new materials			48.9	A	45.5	A	5.5	A
An investment in machinery or equipment			80.2	A	16.3	A	3.5	A
New software developed by or specifically for the firm			20.0	A	72.4	A	7.5	A
Printing and Related Support Activities								
Firms that described the most important innovation	90.3	A						
Of these, % that involved:								
The use of new materials			48.9	B	47.4	B	3.7	A
An investment in machinery or equipment			89.3	A	9.1	A	1.6	A
New software developed by or specifically for the firm			27.8	B	67.0	B	5.1	A
Petroleum and Coal Products Manufacturing								
Firms that described the most important innovation	85.4	A						
Of these, % that involved:								
The use of new materials			57.1	A	42.9	A	0.0	A
An investment in machinery or equipment			74.3	A	25.7	A	0.0	A
New software developed by or specifically for the firm			11.4	A	77.1	A	11.4	A
Chemical Manufacturing (excluding 3254)								
Firms that described the most important innovation	91.6	A						
Of these, % that involved:								
The use of new materials			65.6	A	32.5	A	1.9	A
An investment in machinery or equipment			69.4	A	28.4	A	2.2	A
New software developed by or specifically for the firm			21.1	A	72.8	A	6.2	A
Pharmaceutical and Medicine Manufacturing (3254)								
Firms that described the most important innovation	80.8	A						
Of these, % that involved:								
The use of new materials			73.2	B	24.2	B	2.6	A
An investment in machinery or equipment			60.7	B	36.7	B	2.6	A
New software developed by or specifically for the firm			9.2	A	80.9	A	9.9	A
Plastics and Rubber Products Manufacturing								
Firms that described the most important innovation	91.7	A						
Of these, % that involved:								
The use of new materials			53.5	A	41.9	A	4.5	A
An investment in machinery or equipment			87.0	A	12.1	A	0.9	A
New software developed by or specifically for the firm			17.3	A	75.5	A	7.2	A
Non-Metallic Mineral Products Manufacturing								
Firms that described the most important innovation	85.3	A						
Of these, % that involved:								
The use of new materials			44.4	A	52.3	A	3.3	A
An investment in machinery or equipment			76.4	A	21.7	A	1.8	A
New software developed by or specifically for the firm			22.5	A	69.6	A	7.9	A
Primary Metal Manufacturing								
Firms that described the most important innovation	88.5	A						
Of these, % that involved:								
The use of new materials			48.1	A	45.5	A	6.4	A
An investment in machinery or equipment			80.2	A	17.4	A	2.4	A
New software developed by or specifically for the firm			24.9	A	69.8	A	5.3	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 20.1

Most Important New or Significantly Improved Product or Process During the Period 1997-1999

Industry by Factors of Involvement

Canada, Innovators in Manufacturing

			Yes		No		Do Not Know	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing								
Firms that described the most important innovation	91.8	A						
Of these, % that involved:								
The use of new materials			40.9	A	54.8	A	4.3	A
An investment in machinery or equipment			80.7	A	17.4	A	1.9	A
New software developed by or specifically for the firm			29.6	A	64.0	A	6.5	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)								
Firms that described the most important innovation	85.8	A						
Of these, % that involved:								
The use of new materials			44.7	A	52.9	A	2.4	A
An investment in machinery or equipment			56.2	A	40.6	A	3.2	A
New software developed by or specifically for the firm			25.8	A	68.4	A	5.8	A
Machinery Manufacturing (excluding 3331 & 3332)								
Firms that described the most important innovation	88.2	A						
Of these, % that involved:								
The use of new materials			45.8	B	47.6	B	6.7	A
An investment in machinery or equipment			63.4	B	33.2	A	3.4	A
New software developed by or specifically for the firm			33.3	B	56.8	B	9.9	A
Computer and Peripheral Equipment Manufacturing								
Firms that described the most important innovation	91.9	B						
Of these, % that involved:								
The use of new materials			67.7	B	29.7	B	2.5	A
An investment in machinery or equipment			66.0	B	31.0	B	3.0	A
New software developed by or specifically for the firm			66.9	B	30.6	B	2.5	A
Communications Equipment Manufacturing								
Firms that described the most important innovation	89.0	A						
Of these, % that involved:								
The use of new materials			60.1	B	39.9	B	0.0	A
An investment in machinery or equipment			52.3	B	45.9	B	1.9	A
New software developed by or specifically for the firm			62.3	B	35.9	B	1.9	A
Audio and Video Equipment Manufacturing								
Firms that described the most important innovation	x	A						
Of these, % that involved:								
The use of new materials			x	A	x	A	x	A
An investment in machinery or equipment			x	A	x	A	x	A
New software developed by or specifically for the firm			x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing								
Firms that described the most important innovation	83.7	B						
Of these, % that involved:								
The use of new materials			56.7	B	38.2	B	5.1	A
An investment in machinery or equipment			78.0	B	19.4	B	2.6	A
New software developed by or specifically for the firm			35.3	B	59.6	B	5.1	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media								
Firms that described the most important innovation	91.5	A						
Of these, % that involved:								
The use of new materials			47.3	B	45.6	B	7.2	A
An investment in machinery or equipment			60.2	B	30.1	B	9.7	A
New software developed by or specifically for the firm			81.2	A	14.6	A	4.2	A
Electrical Equipment, Appliance and Component Manufacturing								
Firms that described the most important innovation	89.0	A						
Of these, % that involved:								
The use of new materials			59.9	A	38.1	A	1.9	A
An investment in machinery or equipment			81.7	A	17.1	A	1.2	A
New software developed by or specifically for the firm			39.0	A	53.1	A	7.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 20.1

Most Important New or Significantly Improved Product or Process During the Period 1997-1999

Industry by Factors of Involvement

Canada, Innovators in Manufacturing

			Yes		No		Do Not Know	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing								
Firms that described the most important innovation	89.5	A						
Of these, % that involved:								
The use of new materials			49.2	B	47.4	B	3.4	A
An investment in machinery or equipment			80.4	A	18.6	A	1.0	A
New software developed by or specifically for the firm			25.0	B	66.0	B	9.0	A
Aerospace Product and Parts Manufacturing								
Firms that described the most important innovation	88.0	B						
Of these, % that involved:								
The use of new materials			66.9	B	30.9	B	2.2	A
An investment in machinery or equipment			85.1	B	12.7	B	2.2	A
New software developed by or specifically for the firm			35.3	B	53.0	B	11.7	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment								
Firms that described the most important innovation	96.5	A						
Of these, % that involved:								
The use of new materials			51.4	B	44.7	B	3.9	A
An investment in machinery or equipment			81.0	B	17.0	B	2.1	A
New software developed by or specifically for the firm			21.9	B	75.9	B	2.2	A
Furniture and Related Products Manufacturing								
Firms that described the most important innovation	83.4	A						
Of these, % that involved:								
The use of new materials			53.2	B	44.4	B	2.5	A
An investment in machinery or equipment			76.8	A	19.6	A	3.6	A
New software developed by or specifically for the firm			23.7	A	68.5	A	7.8	A
Miscellaneous Manufacturing								
Firms that described the most important innovation	84.8	A						
Of these, % that involved:								
The use of new materials			61.1	B	37.1	B	1.8	A
An investment in machinery or equipment			75.7	B	22.5	A	1.8	A
New software developed by or specifically for the firm			26.9	B	67.4	B	5.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 21

There are two tables for Question 21. Table 21.1 is for all manufacturing and Table 21.2 is for innovators in manufacturing.

The following contains an explanation of how to read the tables for Question 21 using Table 21.1, 'Total Manufacturing Industries', as an example.

In Table 21.1, for 'Total Manufacturing Industries', 22.6% of innovative firms indicated that they offered products, which were incorporated into buildings and other engineering works during the period, 1997 – 1999. Of these:

- 15.6% indicated that these products made up 1% to 5% of their sales;
- 13.7% indicated that these products made up 6% to 15% of their sales;
- 8.7% indicated that these products made up 16% to 25% of their sales;
- 8.2% indicated that these products made up 26% to 50% of their sales;
- 7.6% indicated that these products made up 51% to 75% of their sales;
- 42.4% indicated that these products made up 76% to 100% of their sales; and
- 3.8% indicated that they did not know what percent of their sales were accounted for by these products.

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Table 21.1

Percent of Firms Offering Products Which Were Incorporated into Buildings and Other Engineering Works

During the Period 1997-1999

Percent of Total Sales by Industry

Canada, All Manufacturing

	% of Firms Offering Products		Percent of Sales							
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	22.8	A	15.6	A	13.7	A	8.7	A	8.2	A
Food Manufacturing	3.5	A	53.8	C	17.4	B	6.1	B	9.8	B
Beverage and Tobacco Product Manufacturing	0.0	A	-	-	-	-	-	-	-	-
Textile Mills	9.1	A	34.7	B	22.3	B	23.0	B	13.3	B
Textile Product Mills	12.3	A	36.7	C	6.3	B	6.1	A	11.1	B
Clothing Manufacturing	0.4	A	x	A	x	D	x	D	x	A
Leather and Allied Product Manufacturing	0.0	A	-	-	-	-	-	-	-	-
Sawmills and Wood Preservation	44.1	A	10.1	A	10.0	A	5.5	A	3.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing	58.1	A	13.9	A	1.6	A	6.5	A	1.5	A
Other Wood Product Manufacturing	46.4	A	11.6	A	6.5	A	7.4	A	7.5	A
Paper Manufacturing	9.2	A	30.2	B	24.2	B	25.6	B	12.4	A
Printing and Related Support Activities	3.1	A	36.2	C	11.5	C	21.4	C	0.0	A
Petroleum and Coal Products Manufacturing	50.9	A	10.9	A	21.8	A	0.0	A	10.9	A
Chemical Manufacturing (excluding 3254)	17.2	A	23.4	B	24.9	B	8.2	A	9.0	A
Pharmaceutical and Medicine Manufacturing (3254)	0.0	A	-	-	-	-	-	-	-	-
Plastics and Rubber Products Manufacturing	26.5	A	24.9	B	20.2	B	8.8	A	6.8	A
Non-Metallic Mineral Products Manufacturing	73.2	A	14.3	A	14.3	A	8.1	A	7.8	A
Primary Metal Manufacturing	41.0	A	15.0	A	20.9	A	14.2	A	18.9	A
Fabricated Metal Product Manufacturing	43.7	A	13.2	A	12.7	A	8.0	A	7.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	9.3	A	10.3	B	25.9	B	10.0	B	17.5	B
Machinery Manufacturing (excluding 3331 & 3332)	24.2	A	11.8	B	16.5	B	10.2	A	3.1	A
Computer and Peripheral Equipment Manufacturing	11.5	A	x	B	x	A	x	B	x	A
Communications Equipment Manufacturing	30.4	B	11.4	B	0.0	A	0.0	A	10.0	A
Audio and Video Equipment Manufacturing	x	A	-	-	-	-	-	-	-	-
Semiconductor and Other Electronic Equipment Manufacturing	8.3	A	x	C	x	C	x	A	x	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	26.8	A	17.1	B	19.3	B	0.0	A	31.6	B
Electrical Equipment, Appliance and Component Manufacturing	48.8	A	10.6	A	6.8	A	11.0	A	9.4	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	3.8	A	30.1	C	30.1	C	0.0	A	15.1	C
Aerospace Product and Parts Manufacturing	7.3	A	x	C	x	C	x	A	x	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	5.2	A	x	B	x	A	x	A	x	A
Furniture and Related Products Manufacturing	17.2	A	4.1	A	3.4	A	8.5	A	8.4	B
Miscellaneous Manufacturing	6.0	A	31.2	C	19.3	B	7.3	C	18.4	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 21.1

Percent of Firms Offering Products Which Were Incorporated into Buildings and Other Engineering Works
During the Period 1997-1999
Percent of Total Sales by Industry
Canada, All Manufacturing

	% of Firms Offering Products		Percent of Sales					
			51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	22.8	A	7.6	A	42.4	A	3.8	A
Food Manufacturing	3.5	A	0.0	A	0.0	A	12.9	B
Beverage and Tobacco Product Manufacturing	0.0	A	-	-	-	-	-	-
Textile Mills	9.1	A	6.7	B	0.0	A	0.0	A
Textile Product Mills	12.3	A	23.3	B	16.5	B	0.0	A
Clothing Manufacturing	0.4	A	x	A	x	A	x	A
Leather and Allied Product Manufacturing	0.0	A	-	-	-	-	-	-
Sawmills and Wood Preservation	44.1	A	6.3	A	55.0	A	9.7	A
Veneer, Plywood and Engineered Wood Product Manufacturing	58.1	A	7.9	A	67.1	A	1.5	A
Other Wood Product Manufacturing	46.4	A	7.4	A	52.0	B	7.6	A
Paper Manufacturing	9.2	A	0.0	A	7.7	A	0.0	A
Printing and Related Support Activities	3.1	A	0.0	A	22.8	C	8.1	B
Petroleum and Coal Products Manufacturing	50.9	A	3.6	A	49.1	A	3.6	A
Chemical Manufacturing (excluding 3254)	17.2	A	7.8	A	21.1	B	5.7	A
Pharmaceutical and Medicine Manufacturing (3254)	0.0	A	-	-	-	-	-	-
Plastics and Rubber Products Manufacturing	26.5	A	5.5	A	31.3	B	2.5	A
Non-Metallic Mineral Products Manufacturing	73.2	A	9.9	A	45.3	A	0.4	A
Primary Metal Manufacturing	41.0	A	5.7	A	16.9	A	8.5	A
Fabricated Metal Product Manufacturing	43.7	A	7.4	A	48.7	B	2.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	9.3	A	10.4	B	5.2	B	20.7	B
Machinery Manufacturing (excluding 3331 & 3332)	24.2	A	10.4	B	42.7	B	5.3	A
Computer and Peripheral Equipment Manufacturing	11.5	A	x	A	x	A	x	A
Communications Equipment Manufacturing	30.4	B	10.4	B	68.2	B	0.0	A
Audio and Video Equipment Manufacturing	x	A	-	-	-	-	-	-
Semiconductor and Other Electronic Equipment Manufacturing	8.3	A	x	A	x	A	x	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	26.8	A	3.2	B	28.8	B	0.0	A
Electrical Equipment, Appliance and Component Manufacturing	48.8	A	12.6	A	45.3	B	4.3	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	3.8	A	0.0	A	24.7	C	0.0	A
Aerospace Product and Parts Manufacturing	7.3	A	x	A	x	A	x	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	5.2	A	x	A	x	C	x	B
Furniture and Related Products Manufacturing	17.2	A	9.6	B	65.9	B	0.0	A
Miscellaneous Manufacturing	6.0	A	0.0	A	19.8	C	4.2	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 21.2

Percent of Firms Offering Products Which Were Incorporated into Buildings and Other Engineering Works During the Period 1997-1999

Percent of Total Sales by Industry

Canada, Innovators in Manufacturing

	% of Firms Offering Products		Percent of Sales							
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	22.7	A	17.0	A	15.0	A	9.8	A	7.5	A
Food Manufacturing	4.1	A	50.8	C	18.5	B	6.5	B	10.5	B
Beverage and Tobacco Product Manufacturing	0.0	A	-	-	-	-	-	-	-	-
Textile Mills	9.9	A	37.2	C	23.9	B	24.6	B	7.1	B
Textile Product Mills	14.7	A	36.7	C	6.3	B	6.1	A	11.1	B
Clothing Manufacturing	0.6	A	x	A	x	D	x	D	x	A
Leather and Allied Product Manufacturing	0.0	A	-	-	-	-	-	-	-	-
Sawmills and Wood Preservation	45.7	A	11.1	A	11.9	A	7.2	A	3.4	A
Veneer, Plywood and Engineered Wood Product Manufacturing	58.6	B	18.9	B	2.5	A	7.7	A	0.0	A
Other Wood Product Manufacturing	49.4	A	13.1	A	6.7	A	9.0	A	8.1	A
Paper Manufacturing	8.3	A	28.5	B	34.5	B	26.1	B	5.5	A
Printing and Related Support Activities	3.7	A	36.2	C	11.5	C	21.4	C	0.0	A
Petroleum and Coal Products Manufacturing	51.2	A	14.3	A	23.8	A	0.0	A	9.5	A
Chemical Manufacturing (excluding 3254)	18.4	A	21.8	B	24.7	B	8.7	A	9.6	A
Pharmaceutical and Medicine Manufacturing (3254)	0.0	A	-	-	-	-	-	-	-	-
Plastics and Rubber Products Manufacturing	28.1	A	24.3	B	22.2	B	9.7	A	6.3	A
Non-Metallic Mineral Products Manufacturing	74.4	A	15.5	A	16.8	A	9.6	A	8.6	A
Primary Metal Manufacturing	39.8	A	18.9	A	22.1	A	17.7	B	13.2	A
Fabricated Metal Product Manufacturing	42.6	A	15.6	A	14.8	A	9.0	A	7.2	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	8.9	A	12.3	B	24.8	B	11.9	B	13.7	B
Machinery Manufacturing (excluding 3331 & 3332)	25.8	A	11.6	B	15.6	B	11.0	B	2.5	A
Computer and Peripheral Equipment Manufacturing	12.0	A	x	B	x	A	x	B	x	A
Communications Equipment Manufacturing	33.2	B	11.4	B	0.0	A	0.0	A	10.0	A
Audio and Video Equipment Manufacturing	x	A	-	-	-	-	-	-	-	-
Semiconductor and Other Electronic Equipment Manufacturing	8.7	A	x	C	x	C	x	A	x	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	21.0	A	19.5	B	17.8	B	0.0	A	26.7	B
Electrical Equipment, Appliance and Component Manufacturing	48.8	A	9.8	A	6.0	A	12.2	B	8.9	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	4.4	A	22.2	B	33.5	C	0.0	A	16.8	C
Aerospace Product and Parts Manufacturing	5.3	A	x	B	x	B	x	A	x	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	5.2	A	x	B	x	A	x	A	x	A
Furniture and Related Products Manufacturing	18.0	A	4.7	A	4.0	A	8.6	B	9.8	B
Miscellaneous Manufacturing	5.6	A	40.6	C	25.1	C	0.0	A	9.4	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 21.2
Percent of Firms Offering Products Which Were Incorporated into Buildings and Other Engineering Works During the Period 1997-1999
Percent of Total Sales by Industry
Canada, Innovators in Manufacturing

	% of Firms Offering Products		Percent of Sales					
			51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	22.7	A	7.8	A	39.1	A	3.7	A
Food Manufacturing	4.1	A	0.0	A	0.0	A	13.8	B
Beverage and Tobacco Product Manufacturing	0.0	A	-	-	-	-	-	-
Textile Mills	9.9	A	7.1	B	0.0	A	0.0	A
Textile Product Mills	14.7	A	23.3	B	16.5	B	0.0	A
Clothing Manufacturing	0.6	A	x	A	x	A	x	A
Leather and Allied Product Manufacturing	0.0	A	-	-	-	-	-	-
Sawmills and Wood Preservation	45.7	A	4.5	A	52.7	B	9.2	A
Veneer, Plywood and Engineered Wood Product Manufacturing	58.6	B	4.9	A	63.6	B	2.3	A
Other Wood Product Manufacturing	49.4	A	7.8	A	50.3	B	5.0	A
Paper Manufacturing	8.3	A	0.0	A	5.3	A	0.0	A
Printing and Related Support Activities	3.7	A	0.0	A	22.8	C	8.1	B
Petroleum and Coal Products Manufacturing	51.2	A	4.8	A	42.9	A	4.8	A
Chemical Manufacturing (excluding 3254)	18.4	A	8.3	A	20.9	B	6.1	A
Pharmaceutical and Medicine Manufacturing (3254)	0.0	A	-	-	-	-	-	-
Plastics and Rubber Products Manufacturing	28.1	A	6.0	A	28.8	B	2.8	A
Non-Metallic Mineral Products Manufacturing	74.4	A	9.9	A	39.7	A	0.0	A
Primary Metal Manufacturing	39.8	A	3.9	A	16.5	A	7.7	A
Fabricated Metal Product Manufacturing	42.6	A	7.8	A	43.9	B	1.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	8.9	A	12.5	B	0.0	A	24.8	B
Machinery Manufacturing (excluding 3331 & 3332)	25.8	A	11.2	B	42.5	B	5.7	A
Computer and Peripheral Equipment Manufacturing	12.0	A	x	A	x	A	x	A
Communications Equipment Manufacturing	33.2	B	10.4	B	68.2	B	0.0	A
Audio and Video Equipment Manufacturing	x	A	-	-	-	-	-	-
Semiconductor and Other Electronic Equipment Manufacturing	8.7	A	x	A	x	A	x	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	21.0	A	4.4	B	31.5	B	0.0	A
Electrical Equipment, Appliance and Component Manufacturing	48.8	A	13.0	B	45.3	B	4.8	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	4.4	A	0.0	A	27.5	C	0.0	A
Aerospace Product and Parts Manufacturing	5.3	A	x	A	x	A	x	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	5.2	A	x	A	x	C	x	B
Furniture and Related Products Manufacturing	18.0	A	11.2	B	61.6	B	0.0	A
Miscellaneous Manufacturing	5.6	A	0.0	A	19.5	C	5.4	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 22

There are two tables for Question 22. Table 22.1 is for all manufacturing and Table 22.2 is for innovators in manufacturing.

The following contains an explanation of how to read the tables for Question 22 using Table 22.1, 'Total Manufacturing Industries', as an example.

In Table 22.1, for 'Total Manufacturing Industries', 6.4% of innovative firms indicated that they offered machinery, equipment or tools, which were used during the process of constructing buildings and other engineering works during the period, 1997 – 1999. Of these:

- 25.5% indicated that these products made up 1% to 5% of their sales;
- 24.5% indicated that these products made up 6% to 15% of their sales;
- 14.1% indicated that these products made up 16% to 25% of their sales;
- 8.5% indicated that these products made up 26% to 50% of their sales;
- 5.0% indicated that these products made up 51% to 75% of their sales;
- 14.3% indicated that these products made up 76% to 100% of their sales; and
- 8.2% indicated that they did not know what percent of their sales were accounted for by these products.

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Table 22.1

Percent of Firms Offering Machinery, Equipment or Tools Which Were Used During the Process of Constructing Buildings and Other Engineering Works During the Period 1997-1999

Percent of Total Sales by Industry

Canada, All Manufacturing

	% of Firms Offering Products		Percent of Sales							
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	6.4	A	25.5	A	24.5	A	14.1	A	8.5	A
Food Manufacturing	0.9	A	x	D	x	A	x	A	x	C
Beverage and Tobacco Product Manufacturing	0.0	A	-	-	-	-	-	-	-	-
Textile Mills	3.9	A	x	C	x	C	x	A	x	A
Textile Product Mills	4.2	B	x	D	x	D	x	A	x	A
Clothing Manufacturing	0.6	A	x	D	x	A	x	A	x	D
Leather and Allied Product Manufacturing	0.0	A	-	-	-	-	-	-	-	-
Sawmills and Wood Preservation	4.3	A	45.2	C	22.0	B	13.4	B	0.0	A
Veneer, Plywood and Engineered Wood Product Manufacturing	4.0	A	x	C	x	C	x	A	x	A
Other Wood Product Manufacturing	5.4	A	32.4	C	24.6	B	6.7	B	22.9	B
Paper Manufacturing	2.7	A	20.0	C	26.4	B	0.0	A	14.3	B
Printing and Related Support Activities	0.3	A	x	A	x	A	x	A	x	A
Petroleum and Coal Products Manufacturing	9.3	A	x	A	x	A	x	A	x	A
Chemical Manufacturing (excluding 3254)	5.0	A	40.3	B	44.7	B	0.0	A	0.0	A
Pharmaceutical and Medicine Manufacturing (3254)	0.0	A	-	-	-	-	-	-	-	-
Plastics and Rubber Products Manufacturing	3.9	A	56.6	C	9.6	B	4.9	B	5.0	A
Non-Metallic Mineral Products Manufacturing	16.0	A	28.6	B	18.3	B	21.4	B	3.5	A
Primary Metal Manufacturing	11.3	A	8.4	A	44.6	B	7.8	B	6.0	B
Fabricated Metal Product Manufacturing	14.2	A	22.5	B	27.5	B	20.4	B	1.6	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	16.5	A	14.9	B	17.0	B	5.1	B	2.9	A
Machinery Manufacturing (excluding 3331 & 3332)	12.1	A	22.4	B	19.6	B	15.8	B	18.3	B
Computer and Peripheral Equipment Manufacturing	4.4	A	x	A	x	A	x	A	x	A
Communications Equipment Manufacturing	3.9	A	x	D	x	A	x	A	x	D
Audio and Video Equipment Manufacturing	x	A	-	-	-	-	-	-	-	-
Semiconductor and Other Electronic Equipment Manufacturing	4.2	A	x	D	x	D	x	A	x	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	6.1	A	x	A	x	C	x	A	x	A
Electrical Equipment, Appliance and Component Manufacturing	16.0	A	28.7	B	29.3	B	16.1	B	15.5	B
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	11.9	A	5.5	A	26.0	B	15.6	B	21.9	B
Aerospace Product and Parts Manufacturing	1.4	A	x	A	x	A	x	A	x	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	4.5	A	x	D	x	A	x	A	x	A
Furniture and Related Products Manufacturing	0.8	A	x	D	x	A	x	A	x	D
Miscellaneous Manufacturing	0.2	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 22.1

Percent of Firms Offering Machinery, Equipment or Tools Which Were Used During the Process of Constructing Buildings and Other Engineering Works During the Period 1997-1999

Percent of Total Sales by Industry

Canada, All Manufacturing

	% of Firms Offering Products		Percent of Sales					
			51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	6.4	A	5.0	A	14.3	A	8.2	A
Food Manufacturing	0.9	A	x	A	x	A	x	C
Beverage and Tobacco Product Manufacturing	0.0	A	-	-	-	-	-	-
Textile Mills	3.9	A	x	A	x	A	x	A
Textile Product Mills	4.2	B	x	A	x	A	x	A
Clothing Manufacturing	0.6	A	x	A	x	A	x	C
Leather and Allied Product Manufacturing	0.0	A	-	-	-	-	-	-
Sawmills and Wood Preservation	4.3	A	0.0	A	10.4	B	9.0	B
Veneer, Plywood and Engineered Wood Product Manufacturing	4.0	A	x	A	x	A	x	A
Other Wood Product Manufacturing	5.4	A	0.0	A	6.7	B	6.7	B
Paper Manufacturing	2.7	A	14.3	B	0.0	A	25.1	B
Printing and Related Support Activities	0.3	A	x	A	x	A	x	A
Petroleum and Coal Products Manufacturing	9.3	A	x	A	x	A	x	A
Chemical Manufacturing (excluding 3254)	5.0	A	0.0	A	6.0	A	9.0	B
Pharmaceutical and Medicine Manufacturing (3254)	0.0	A	-	-	-	-	-	-
Plastics and Rubber Products Manufacturing	3.9	A	9.5	A	7.1	B	7.3	B
Non-Metallic Mineral Products Manufacturing	16.0	A	7.5	A	17.2	B	3.6	A
Primary Metal Manufacturing	11.3	A	18.9	B	4.1	A	10.3	B
Fabricated Metal Product Manufacturing	14.2	A	5.4	A	15.8	B	6.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	16.5	A	6.5	A	33.4	B	20.2	B
Machinery Manufacturing (excluding 3331 & 3332)	12.1	A	1.8	A	9.8	B	12.4	B
Computer and Peripheral Equipment Manufacturing	4.4	A	x	A	x	A	x	A
Communications Equipment Manufacturing	3.9	A	x	A	x	A	x	A
Audio and Video Equipment Manufacturing	x	A	-	-	-	-	-	-
Semiconductor and Other Electronic Equipment Manufacturing	4.2	A	x	A	x	A	x	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	6.1	A	x	A	x	C	x	A
Electrical Equipment, Appliance and Component Manufacturing	16.0	A	0.0	A	6.0	A	4.4	B
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	11.9	A	6.3	A	22.0	B	2.8	A
Aerospace Product and Parts Manufacturing	1.4	A	x	A	x	A	x	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	4.5	A	x	A	x	D	x	A
Furniture and Related Products Manufacturing	0.8	A	x	A	x	A	x	A
Miscellaneous Manufacturing	0.2	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 22.2

Percent of Firms Offering Machinery, Equipment or Tools Which Were Used During the Process of Constructing Buildings and Other Engineering Works During the Period 1997-1999

Percent of Total Sales by Industry

Canada, Innovators in Manufacturing

	% of Firms Offering Products		Percent of Sales							
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	6.6	A	27.6	A	22.1	A	14.6	A	8.8	A
Food Manufacturing	1.2	A	x	D	x	A	x	A	x	C
Beverage and Tobacco Product Manufacturing	0.0	A	-	-	-	-	-	-	-	-
Textile Mills	4.5	A	x	C	x	C	x	A	x	A
Textile Product Mills	5.0	B	x	D	x	D	x	A	x	A
Clothing Manufacturing	0.9	A	x	D	x	A	x	A	x	D
Leather and Allied Product Manufacturing	0.0	A	-	-	-	-	-	-	-	-
Sawmills and Wood Preservation	4.0	A	x	C	x	C	x	A	x	A
Veneer, Plywood and Engineered Wood Product Manufacturing	4.7	A	x	C	x	C	x	A	x	A
Other Wood Product Manufacturing	5.4	A	42.1	C	31.9	C	8.7	B	8.6	B
Paper Manufacturing	2.0	A	x	C	x	C	x	A	x	A
Printing and Related Support Activities	0.3	A	x	A	x	A	x	A	x	A
Petroleum and Coal Products Manufacturing	9.8	A	x	A	x	A	x	A	x	A
Chemical Manufacturing (excluding 3254)	5.3	A	42.9	C	47.5	C	0.0	A	0.0	A
Pharmaceutical and Medicine Manufacturing (3254)	0.0	A	-	-	-	-	-	-	-	-
Plastics and Rubber Products Manufacturing	4.5	A	56.6	C	9.6	B	4.9	B	5.0	A
Non-Metallic Mineral Products Manufacturing	14.8	A	31.3	B	18.9	B	20.1	B	2.7	A
Primary Metal Manufacturing	11.8	A	10.6	A	45.6	B	9.9	B	7.7	B
Fabricated Metal Product Manufacturing	14.6	A	25.8	B	19.0	B	23.5	B	2.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	18.2	A	15.4	B	17.5	B	5.3	B	3.0	A
Machinery Manufacturing (excluding 3331 & 3332)	11.9	A	23.7	B	14.7	B	18.5	B	19.6	B
Computer and Peripheral Equipment Manufacturing	4.7	A	x	A	x	A	x	A	x	A
Communications Equipment Manufacturing	4.3	A	x	D	x	A	x	A	x	D
Audio and Video Equipment Manufacturing	x	A	-	-	-	-	-	-	-	-
Semiconductor and Other Electronic Equipment Manufacturing	4.4	A	x	D	x	D	x	A	x	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	5.8	A	x	A	x	C	x	A	x	A
Electrical Equipment, Appliance and Component Manufacturing	16.5	A	26.3	B	31.7	B	14.1	B	16.7	B
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	13.6	A	6.1	A	25.1	B	17.2	B	24.3	B
Aerospace Product and Parts Manufacturing	1.7	A	x	A	x	A	x	A	x	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	6.0	A	x	D	x	A	x	A	x	A
Furniture and Related Products Manufacturing	0.9	A	x	D	x	A	x	A	x	D
Miscellaneous Manufacturing	0.3	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 22.2

Percent of Firms Offering Machinery, Equipment or Tools Which Were Used During the Process of Constructing Buildings and Other Engineering Works During the Period 1997-1999

Percent of Total Sales by Industry

Canada, Innovators in Manufacturing

	% of Firms Offering Products		Percent of Sales					
			51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	6.6	A	5.1	A	13.8	A	8.0	A
Food Manufacturing	1.2	A	x	A	x	A	x	C
Beverage and Tobacco Product Manufacturing	0.0	A	-	-	-	-	-	-
Textile Mills	4.5	A	x	A	x	A	x	A
Textile Product Mills	5.0	B	x	A	x	A	x	A
Clothing Manufacturing	0.9	A	x	A	x	A	x	C
Leather and Allied Product Manufacturing	0.0	A	-	-	-	-	-	-
Sawmills and Wood Preservation	4.0	A	x	A	x	B	x	C
Veneer, Plywood and Engineered Wood Product Manufacturing	4.7	A	x	A	x	A	x	A
Other Wood Product Manufacturing	5.4	A	0.0	A	8.6	B	0.0	A
Paper Manufacturing	2.0	A	x	A	x	A	x	C
Printing and Related Support Activities	0.3	A	x	A	x	A	x	A
Petroleum and Coal Products Manufacturing	9.8	A	x	A	x	A	x	A
Chemical Manufacturing (excluding 3254)	5.3	A	0.0	A	0.0	A	9.6	B
Pharmaceutical and Medicine Manufacturing (3254)	0.0	A	-	-	-	-	-	-
Plastics and Rubber Products Manufacturing	4.5	A	9.5	A	7.1	B	7.3	B
Non-Metallic Mineral Products Manufacturing	14.8	A	11.2	B	15.8	B	0.0	A
Primary Metal Manufacturing	11.8	A	13.2	B	0.0	A	13.1	B
Fabricated Metal Product Manufacturing	14.6	A	7.1	A	15.8	B	6.7	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	18.2	A	6.7	A	31.3	B	20.8	B
Machinery Manufacturing (excluding 3331 & 3332)	11.9	A	2.1	A	11.5	B	9.9	B
Computer and Peripheral Equipment Manufacturing	4.7	A	x	A	x	A	x	A
Communications Equipment Manufacturing	4.3	A	x	A	x	A	x	A
Audio and Video Equipment Manufacturing	x	A	-	-	-	-	-	-
Semiconductor and Other Electronic Equipment Manufacturing	4.4	A	x	A	x	A	x	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	5.8	A	x	A	x	C	x	A
Electrical Equipment, Appliance and Component Manufacturing	16.5	A	0.0	A	6.4	A	4.8	B
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	13.6	A	3.5	A	20.7	B	3.1	A
Aerospace Product and Parts Manufacturing	1.7	A	x	A	x	A	x	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	6.0	A	x	A	x	D	x	A
Furniture and Related Products Manufacturing	0.9	A	x	A	x	A	x	A
Miscellaneous Manufacturing	0.3	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 23

There are two tables for Question 23. Table 23.1 is for all manufacturing and Table 23.2 is for innovators in manufacturing.

The following contains an explanation of how to read the tables for Question 23 using Table 23.1, 'Total Manufacturing Industries', as an example.

In Table 23.1, for 'Total Manufacturing Industries', 21.9% of innovative firms indicated that their products were used by natural resource industries during the period, 1997 – 1999. Of these:

- 75.6% attributed sales to mining, of which:
  - 47.6% indicated that these products made up 1% to 5% of their sales;
  - 17.3% indicated that these products made up 6% to 15% of their sales;
  - 7.4% indicated that these products made up 16% to 25% of their sales;
  - 3.1% indicated that these products made up 26% to 50% of their sales;
  - 1.8% indicated that these products made up 51% to 75% of their sales;
  - 3.3% indicated that these products made up 76% to 100% of their sales; and
  - 19.5% indicated that they did not know what percent of their sales were accounted for by these products.
- 76.1% attributed sales to logging and forestry, of which:
  - 36.6% indicated that these products made up 1% to 5% of their sales;
  - …and so on…

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Table 23.1

Percent of Firms With Products Used by Natural Resource Industries During the Period 1997-1999

Percent of Total Sales by Industry

Canada, All Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries																
Firms with products used	21.9	A														
Of these, % that attributed sales to the following:																
Mining	75.6	A	47.6	A	17.3	A	7.4	A	3.1	A	1.8	A	3.3	A	19.5	A
Logging and forestry	76.1	A	36.6	A	15.1	A	9.1	A	6.1	A	3.5	A	9.2	A	20.4	A
Oil and gas extraction	69.7	A	35.6	A	15.8	A	9.0	A	4.9	A	3.3	A	9.0	A	22.4	A
Electrical utilities	68.0	A	39.7	A	16.8	A	5.6	A	3.8	A	1.9	A	4.8	A	27.3	A
Food Manufacturing																
Firms with products used	2.4	A														
Of these, % that attributed sales to the following:																
Mining	74.3	B	64.1	C	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	35.9	C
Logging and forestry	84.9	B	56.1	C	0.0	A	0.0	A	6.2	B	0.0	A	6.2	B	31.4	C
Oil and gas extraction	69.0	B	61.4	C	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	38.6	C
Electrical utilities	78.8	B	47.0	C	19.1	B	0.0	A	0.0	A	0.0	A	0.0	A	33.8	C
Beverage and Tobacco Product Manufacturing																
Firms with products used	3.3	A														
Of these, % that attributed sales to the following:																
Mining	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Logging and forestry	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Oil and gas extraction	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Electrical utilities	x	A	x	A	x	A	x	A	x	C	x	A	x	C	x	B
Textile Mills																
Firms with products used	9.1	A														
Of these, % that attributed sales to the following:																
Mining	70.9	B	70.9	C	29.1	C	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Logging and forestry	65.8	B	49.2	C	10.1	B	0.0	A	20.3	C	0.0	A	10.2	B	10.1	B
Oil and gas extraction	57.6	B	47.6	C	28.1	C	0.0	A	0.0	A	0.0	A	0.0	A	24.3	C
Electrical utilities	43.7	B	x	C	x	C	x	A	x	A	x	A	x	A	x	A
Textile Product Mills																
Firms with products used	23.3	B														
Of these, % that attributed sales to the following:																
Mining	66.0	B	46.2	C	43.9	C	0.0	A	0.0	A	0.0	A	4.9	A	5.0	B
Logging and forestry	81.6	B	31.0	C	15.1	B	12.1	B	0.0	A	8.8	B	0.0	A	33.0	C
Oil and gas extraction	55.2	C	28.5	C	6.5	B	6.5	B	0.0	A	0.0	A	9.7	B	48.7	C
Electrical utilities	33.7	C	x	B	x	A	x	B	x	A	x	A	x	A	x	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.1

Percent of Firms With Products Used by Natural Resource Industries During the Period 1997-1999

Percent of Total Sales by Industry

Canada, All Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Clothing Manufacturing																
Firms with products used	4.4	A														
Of these, % that attributed sales to the following:																
Mining	95.6	B	58.8	C	36.5	C	0.0	A	0.0	A	0.0	A	0.0	A	4.6	B
Logging and forestry	95.6	B	62.4	C	26.7	C	10.9	B	0.0	A	0.0	A	0.0	A	0.0	A
Oil and gas extraction	100.0	A	66.1	C	15.8	B	9.3	B	4.4	A	0.0	A	0.0	A	4.4	B
Electrical utilities	100.0	A	60.6	C	30.5	B	0.0	A	4.4	A	0.0	A	0.0	A	4.4	B
Leather and Allied Product Manufacturing																
Firms with products used	11.3	A														
Of these, % that attributed sales to the following:																
Mining	100.0	A	57.7	C	11.5	B	0.0	A	0.0	A	0.0	A	0.0	A	30.8	C
Logging and forestry	88.5	C	52.2	C	13.0	B	0.0	A	0.0	A	0.0	A	0.0	A	34.8	C
Oil and gas extraction	80.8	C	71.4	C	14.3	B	0.0	A	0.0	A	14.3	C	0.0	A	0.0	A
Electrical utilities	80.8	C	57.1	C	28.6	C	14.3	C	0.0	A	0.0	A	0.0	A	0.0	A
Sawmills and Wood Preservation																
Firms with products used	24.6	A														
Of these, % that attributed sales to the following:																
Mining	37.4	B	52.1	B	3.9	A	0.0	A	0.0	A	0.0	A	0.0	A	44.0	B
Logging and forestry	91.3	A	19.3	A	22.3	B	6.7	A	3.7	A	3.3	A	35.7	B	9.2	A
Oil and gas extraction	37.7	B	30.1	B	4.6	A	0.0	A	4.6	A	0.0	A	0.0	A	51.7	B
Electrical utilities	42.9	B	25.3	B	5.4	B	0.0	A	0.0	A	20.1	B	8.8	B	40.4	B
Veneer, Plywood and Engineered Wood Product Manufacturing																
Firms with products used	11.3	A														
Of these, % that attributed sales to the following:																
Mining	62.7	B	45.5	C	15.4	B	0.0	A	0.0	A	0.0	A	0.0	A	39.2	B
Logging and forestry	100.0	A	46.6	B	9.6	B	9.6	B	0.0	A	0.0	A	26.3	B	7.8	A
Oil and gas extraction	62.7	B	60.8	B	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	39.2	B
Electrical utilities	53.1	B	x	C	x	A	x	A	x	A	x	A	x	A	x	C
Other Wood Product Manufacturing																
Firms with products used	11.1	A														
Of these, % that attributed sales to the following:																
Mining	65.7	B	27.3	B	4.7	B	12.1	B	0.0	A	0.0	A	0.0	A	55.9	B
Logging and forestry	88.0	B	24.4	B	13.6	B	16.9	B	4.8	A	13.6	B	14.0	B	12.7	B
Oil and gas extraction	61.9	B	22.8	B	18.1	B	19.0	B	5.3	B	0.0	A	0.0	A	34.8	B
Electrical utilities	54.7	B	19.8	B	14.5	B	21.5	C	0.0	A	0.0	A	0.0	A	44.2	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.1

Percent of Firms With Products Used by Natural Resource Industries During the Period 1997-1999

Percent of Total Sales by Industry

Canada, All Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Paper Manufacturing																
Firms with products used	18.6	A														
Of these, % that attributed sales to the following:																
Mining	51.0	B	35.1	B	0.0	A	3.6	A	0.0	A	0.0	A	0.0	A	61.3	B
Logging and forestry	91.5	A	17.7	A	6.2	A	5.2	A	3.2	A	14.9	B	32.7	B	20.1	B
Oil and gas extraction	49.1	B	32.6	B	0.0	A	3.8	A	4.0	A	0.0	A	3.8	A	55.8	B
Electrical utilities	46.3	B	30.1	B	4.5	A	4.0	A	0.0	A	0.0	A	0.0	A	61.3	B
Printing and Related Support Activities																
Firms with products used	12.4	A														
Of these, % that attributed sales to the following:																
Mining	70.2	B	78.7	B	6.0	B	0.0	A	0.0	A	0.0	A	0.0	A	15.4	B
Logging and forestry	85.4	B	58.9	B	14.1	B	5.9	B	0.0	A	0.0	A	0.0	A	21.1	B
Oil and gas extraction	76.4	B	50.0	C	9.0	B	9.5	B	2.4	B	0.0	A	0.0	A	29.1	B
Electrical utilities	80.7	B	60.7	C	4.9	B	9.5	B	0.0	A	0.0	A	0.0	A	24.9	B
Petroleum and Coal Products Manufacturing																
Firms with products used	37.0	A														
Of these, % that attributed sales to the following:																
Mining	95.0	A	73.7	A	10.5	A	0.0	A	5.3	A	0.0	A	0.0	A	10.5	A
Logging and forestry	80.0	A	56.3	A	31.3	A	0.0	A	0.0	A	0.0	A	0.0	A	12.5	A
Oil and gas extraction	80.0	A	56.3	A	37.5	A	0.0	A	0.0	A	0.0	A	6.3	A	0.0	A
Electrical utilities	75.0	A	60.0	A	20.0	A	6.7	A	0.0	A	0.0	A	0.0	A	13.3	A
Chemical Manufacturing (excluding 3254)																
Firms with products used	31.2	A														
Of these, % that attributed sales to the following:																
Mining	72.8	A	41.3	B	15.7	B	7.8	A	1.1	A	1.1	A	11.0	A	22.0	A
Logging and forestry	78.7	A	31.9	B	17.5	B	8.7	A	2.3	A	4.0	A	17.3	A	18.3	A
Oil and gas extraction	67.4	A	47.4	B	17.6	B	8.0	A	0.0	A	0.0	A	5.6	A	21.3	A
Electrical utilities	57.8	B	45.1	B	9.0	B	3.9	A	0.0	A	0.0	A	2.5	A	39.6	B
Pharmaceutical and Medicine Manufacturing (3254)																
Firms with products used	0.0	A														
Of these, % that attributed sales to the following:																
Mining	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Logging and forestry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical utilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.1

Percent of Firms With Products Used by Natural Resource Industries During the Period 1997-1999

Percent of Total Sales by Industry

Canada, All Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Plastics and Rubber Products Manufacturing																
Firms with products used	20.2	A														
Of these, % that attributed sales to the following:																
Mining	76.1	B	37.2	B	25.9	B	6.1	A	8.0	A	4.3	A	8.0	B	10.5	B
Logging and forestry	71.3	B	42.4	B	15.6	B	13.6	B	6.6	A	2.0	A	5.7	A	14.2	B
Oil and gas extraction	73.8	B	41.1	B	13.0	B	6.3	A	5.0	A	1.2	A	8.0	A	25.3	B
Electrical utilities	71.2	B	44.5	B	15.7	B	7.3	B	1.3	A	0.0	A	4.4	A	26.9	B
Non-Metallic Mineral Products Manufacturing																
Firms with products used	31.5	A														
Of these, % that attributed sales to the following:																
Mining	80.6	A	44.2	B	18.0	B	8.5	A	7.4	A	2.4	A	1.5	A	18.0	B
Logging and forestry	71.3	B	51.8	B	7.5	A	4.4	A	9.1	A	1.7	A	1.2	A	24.3	B
Oil and gas extraction	63.8	B	44.0	B	16.4	B	7.6	B	1.9	A	0.0	A	1.5	A	28.5	B
Electrical utilities	74.6	B	49.8	B	18.0	B	10.1	A	0.0	A	0.0	A	0.0	A	22.1	B
Primary Metal Manufacturing																
Firms with products used	47.5	A														
Of these, % that attributed sales to the following:																
Mining	82.4	A	46.5	B	23.8	A	4.9	A	4.2	A	5.5	A	4.0	A	11.1	A
Logging and forestry	69.5	A	34.0	B	22.0	A	7.3	A	5.6	A	2.7	A	1.5	A	27.1	B
Oil and gas extraction	73.3	A	30.8	A	22.5	B	6.6	A	4.8	A	9.5	A	2.7	A	23.1	B
Electrical utilities	71.6	A	36.8	B	14.2	A	4.6	A	6.8	A	0.0	A	3.4	A	34.0	B
Fabricated Metal Product Manufacturing																
Firms with products used	40.5	A														
Of these, % that attributed sales to the following:																
Mining	83.9	A	49.7	B	15.3	A	11.0	A	3.0	A	2.8	A	3.6	A	14.5	A
Logging and forestry	74.3	B	38.3	B	13.7	A	10.9	A	10.4	A	3.2	A	4.3	A	19.2	B
Oil and gas extraction	75.5	A	34.0	B	14.3	A	11.2	A	6.7	A	3.4	A	14.0	A	16.4	B
Electrical utilities	67.3	B	39.7	B	23.6	B	5.0	A	5.6	A	0.8	A	2.9	A	22.3	B
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)																
Firms with products used	46.6	A														
Of these, % that attributed sales to the following:																
Mining	61.9	A	30.9	B	10.4	A	3.2	A	9.8	A	3.2	A	11.5	A	30.9	B
Logging and forestry	83.1	A	23.1	A	3.5	A	3.7	A	7.5	A	1.3	A	33.7	B	27.3	A
Oil and gas extraction	57.3	A	21.5	A	3.8	A	7.0	A	5.4	A	1.8	A	37.2	B	23.4	B
Electrical utilities	48.3	B	23.8	B	8.6	A	6.0	A	1.9	A	0.0	A	0.0	A	59.7	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.1

Percent of Firms With Products Used by Natural Resource Industries During the Period 1997-1999

Percent of Total Sales by Industry

Canada, All Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)																
Firms with products used	35.3	A														
Of these, % that attributed sales to the following:																
Mining	79.3	B	48.3	B	22.8	B	9.7	A	0.7	A	0.7	A	0.8	A	17.1	B
Logging and forestry	76.1	B	30.5	B	28.0	B	11.0	B	7.7	A	3.8	A	5.0	A	14.1	A
Oil and gas extraction	70.1	B	24.5	B	20.6	B	11.7	A	7.0	A	10.4	B	7.6	A	18.3	B
Electrical utilities	67.2	B	40.2	B	17.5	B	3.5	A	7.0	B	3.3	A	3.8	A	24.7	B
Computer and Peripheral Equipment Manufacturing																
Firms with products used	13.7	A														
Of these, % that attributed sales to the following:																
Mining	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Logging and forestry	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Oil and gas extraction	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Electrical utilities	x	A	x	C	x	A	x	A	x	A	x	A	x	A	x	A
Communications Equipment Manufacturing																
Firms with products used	18.4	B														
Of these, % that attributed sales to the following:																
Mining	82.2	B	32.5	C	23.7	C	0.0	A	0.0	A	0.0	A	0.0	A	43.7	C
Logging and forestry	44.9	C	x	B	x	A	x	A	x	A	x	A	x	A	x	B
Oil and gas extraction	73.9	B	48.2	C	11.1	A	12.1	B	14.3	B	0.0	A	0.0	A	14.3	B
Electrical utilities	91.8	A	48.6	C	30.2	B	0.0	A	11.5	B	0.0	A	9.7	B	0.0	A
Audio and Video Equipment Manufacturing																
Firms with products used	x	A														
Of these, % that attributed sales to the following:																
Mining	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Logging and forestry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical utilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Semiconductor and Other Electronic Equipment Manufacturing																
Firms with products used	12.6	A														
Of these, % that attributed sales to the following:																
Mining	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Logging and forestry	x	C	x	D	x	D	x	A	x	A	x	A	x	A	x	A
Oil and gas extraction	x	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Electrical utilities	x	A	x	C	x	C	x	A	x	A	x	C	x	C	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.1

Percent of Firms With Products Used by Natural Resource Industries During the Period 1997-1999

Percent of Total Sales by Industry

Canada, All Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media																
Firms with products used	32.0	B														
Of these, % that attributed sales to the following:																
Mining	51.4	B	20.2	B	42.5	B	20.1	B	5.0	A	0.0	A	0.0	A	12.2	A
Logging and forestry	46.7	B	18.2	B	10.5	A	32.5	B	0.0	A	6.7	B	13.6	B	18.5	B
Oil and gas extraction	52.7	B	23.0	B	10.8	A	14.5	B	11.2	B	15.7	B	24.7	B	0.0	A
Electrical utilities	78.8	B	17.5	B	24.1	B	6.9	B	6.5	A	0.0	A	30.9	B	14.2	A
Electrical Equipment, Appliance and Component Manufacturing																
Firms with products used	47.5	A														
Of these, % that attributed sales to the following:																
Mining	78.9	A	59.2	B	16.4	B	6.9	A	1.2	A	0.0	A	1.9	A	14.3	A
Logging and forestry	70.2	B	51.8	B	12.0	B	8.5	A	1.4	A	0.0	A	5.2	A	21.1	B
Oil and gas extraction	75.3	A	26.8	B	26.0	B	15.1	B	1.3	A	1.3	A	6.6	A	22.9	B
Electrical utilities	95.9	A	23.1	B	10.4	B	8.9	A	7.7	A	6.2	A	21.9	B	12.8	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing																
Firms with products used	23.9	A														
Of these, % that attributed sales to the following:																
Mining	76.8	B	52.7	B	16.1	B	5.8	A	3.1	A	0.0	A	0.0	A	22.3	B
Logging and forestry	75.0	B	32.8	B	15.6	A	15.0	B	7.2	A	4.1	A	6.8	B	17.8	B
Oil and gas extraction	76.5	B	26.8	B	18.0	B	9.2	B	12.3	B	1.8	A	8.6	A	23.3	B
Electrical utilities	68.5	B	41.9	B	3.5	A	4.5	A	2.3	A	10.0	B	0.0	A	37.9	B
Aerospace Product and Parts Manufacturing																
Firms with products used	18.9	A														
Of these, % that attributed sales to the following:																
Mining	61.5	B	x	B	x	C	x	C	x	A	x	A	x	A	x	C
Logging and forestry	76.4	B	19.5	B	39.1	B	11.3	B	0.0	A	0.0	A	0.0	A	30.1	C
Oil and gas extraction	70.1	B	33.6	C	33.8	C	12.3	B	0.0	A	0.0	A	0.0	A	20.3	C
Electrical utilities	85.1	A	53.2	C	36.5	B	0.0	A	0.0	A	0.0	A	0.0	A	10.3	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment																
Firms with products used	27.2	B														
Of these, % that attributed sales to the following:																
Mining	80.2	C	73.3	C	7.2	B	6.8	C	6.8	C	0.0	A	0.0	A	6.0	A
Logging and forestry	70.4	C	64.1	C	0.0	A	7.8	C	7.8	C	6.8	C	0.0	A	13.6	B
Oil and gas extraction	64.5	C	60.4	C	17.4	C	7.4	C	0.0	A	0.0	A	14.8	B	0.0	A
Electrical utilities	69.0	C	56.4	C	28.7	C	7.9	C	0.0	A	0.0	A	0.0	A	6.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.1

Percent of Firms With Products Used by Natural Resource Industries During the Period 1997-1999

Percent of Total Sales by Industry

Canada, All Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing																
Firms with products used	3.0	A														
Of these, % that attributed sales to the following:																
Mining	76.0	C	x	D	x	A	x	A	x	A	x	A	x	A	x	D
Logging and forestry	100.0	A	21.6	C	0.0	A	0.0	A	0.0	A	24.0	C	0.0	A	54.4	C
Oil and gas extraction	76.0	C	x	C	x	A	x	A	x	A	x	A	x	A	x	C
Electrical utilities	76.0	C	x	C	x	A	x	A	x	A	x	A	x	A	x	C
Miscellaneous Manufacturing																
Firms with products used	6.6	A														
Of these, % that attributed sales to the following:																
Mining	100.0	A	24.8	C	20.2	C	0.0	A	6.6	C	0.0	A	0.0	A	48.4	C
Logging and forestry	79.8	C	26.0	C	...	C	0.0	A	0.0	A	0.0	A	0.0	A	...	D
Oil and gas extraction	100.0	A	41.4	C	30.4	C	0.0	A	0.0	A	4.1	C	0.0	A	24.1	C
Electrical utilities	100.0	A	55.1	C	4.1	C	0.0	A	0.0	A	0.0	A	12.3	B	28.5	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.2
Percent of Firms With Products Used by Natural Resource Industries During the Period, 1997 - 1999
Percent of Total Sales by Industry
Canada, Innovators in Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries																
Firms with products used	22.2	A														
Of these, % that attributed sales to the following:																
Mining	74.7	A	49.4	A	17.8	A	7.5	A	2.5	A	1.8	A	2.9	A	18.0	A
Logging and forestry	74.9	A	37.8	A	15.0	A	9.0	A	6.4	A	3.6	A	9.2	A	19.0	A
Oil and gas extraction	69.0	A	37.1	A	16.4	A	9.6	A	5.0	A	3.0	A	8.3	A	20.6	A
Electrical utilities	68.2	A	40.0	A	17.4	A	6.0	A	4.1	A	2.0	A	5.1	A	25.3	A
Food Manufacturing																
Firms with products used	2.2	A														
Of these, % that attributed sales to the following:																
Mining	65.0	B	x	C	x	A	x	A	x	A	x	A	x	A	x	C
Logging and forestry	79.5	B	52.0	C	0.0	A	0.0	A	9.0	B	0.0	A	9.0	B	29.9	C
Oil and gas extraction	57.8	C	x	C	x	A	x	A	x	A	x	A	x	A	x	C
Electrical utilities	71.2	B	x	C	x	C	x	A	x	A	x	A	x	A	x	C
Beverage and Tobacco Product Manufacturing																
Firms with products used	4.4	A														
Of these, % that attributed sales to the following:																
Mining	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Logging and forestry	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Oil and gas extraction	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Electrical utilities	x	A	x	A	x	A	x	A	x	C	x	A	x	C	x	B
Textile Mills																
Firms with products used	10.6	A														
Of these, % that attributed sales to the following:																
Mining	70.9	B	70.9	C	29.1	C	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Logging and forestry	65.8	B	49.2	C	10.1	B	0.0	A	20.3	C	0.0	A	10.2	B	10.1	B
Oil and gas extraction	57.6	B	47.6	C	28.1	C	0.0	A	0.0	A	0.0	A	0.0	A	24.3	C
Electrical utilities	43.7	B	x	C	x	C	x	A	x	A	x	A	x	A	x	A
Textile Product Mills																
Firms with products used	27.9	B														
Of these, % that attributed sales to the following:																
Mining	66.0	B	46.2	C	43.9	C	0.0	A	0.0	A	0.0	A	4.9	A	5.0	B
Logging and forestry	81.6	B	31.0	C	15.1	B	12.1	B	0.0	A	8.8	B	0.0	A	33.0	C
Oil and gas extraction	55.2	C	28.5	C	6.5	B	6.5	B	0.0	A	0.0	A	9.7	B	48.7	C
Electrical utilities	33.7	C	x	B	x	A	x	B	x	A	x	A	x	A	x	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.2

Percent of Firms With Products Used by Natural Resource Industries During the Period, 1997 - 1999

Percent of Total Sales by Industry

Canada, Innovators in Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Clothing Manufacturing																
Firms with products used	5.5	A														
Of these, % that attributed sales to the following:																
Mining	95.0	B	58.3	C	41.7	C	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Logging and forestry	95.0	B	71.2	C	21.6	B	7.1	B	0.0	A	0.0	A	0.0	A	0.0	A
Oil and gas extraction	100.0	A	66.5	C	17.9	C	10.5	B	5.0	A	0.0	A	0.0	A	0.0	A
Electrical utilities	100.0	A	68.8	B	26.2	B	0.0	A	5.0	A	0.0	A	0.0	A	0.0	A
Leather and Allied Product Manufacturing																
Firms with products used	15.6	B														
Of these, % that attributed sales to the following:																
Mining	100.0	A	57.7	C	11.5	B	0.0	A	0.0	A	0.0	A	0.0	A	30.8	C
Logging and forestry	88.5	C	52.2	C	13.0	B	0.0	A	0.0	A	0.0	A	0.0	A	34.8	C
Oil and gas extraction	80.8	C	71.4	C	14.3	B	0.0	A	0.0	A	14.3	C	0.0	A	0.0	A
Electrical utilities	80.8	C	57.1	C	28.6	C	14.3	C	0.0	A	0.0	A	0.0	A	0.0	A
Sawmills and Wood Preservation																
Firms with products used	24.6	A														
Of these, % that attributed sales to the following:																
Mining	41.7	B	51.1	B	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	48.9	B
Logging and forestry	93.4	A	20.1	B	24.1	B	5.5	A	0.0	A	4.4	A	33.8	B	12.2	A
Oil and gas extraction	44.1	B	33.7	B	5.3	A	0.0	A	5.3	A	0.0	A	0.0	A	55.7	B
Electrical utilities	44.0	B	28.9	B	7.2	B	0.0	A	0.0	A	10.3	B	0.0	A	53.6	B
Veneer, Plywood and Engineered Wood Product Manufacturing																
Firms with products used	12.9	A														
Of these, % that attributed sales to the following:																
Mining	62.8	C	x	C	x	C	x	A	x	A	x	A	x	A	x	B
Logging and forestry	100.0	A	49.8	C	13.0	B	13.0	B	0.0	A	0.0	A	24.2	C	0.0	A
Oil and gas extraction	62.8	C	x	B	x	A	x	A	x	A	x	A	x	A	x	B
Electrical utilities	49.8	C	x	C	x	A	x	A	x	A	x	A	x	A	x	C
Other Wood Product Manufacturing																
Firms with products used	12.3	A														
Of these, % that attributed sales to the following:																
Mining	60.0	B	34.9	C	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	65.1	C
Logging and forestry	86.0	B	29.2	B	16.3	B	5.2	B	5.8	B	16.2	B	16.7	B	10.7	B
Oil and gas extraction	55.5	B	29.7	B	17.0	B	8.0	C	0.0	A	0.0	A	0.0	A	45.2	C
Electrical utilities	50.8	B	24.9	B	18.3	B	8.8	C	0.0	A	0.0	A	0.0	A	48.1	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.2

Percent of Firms With Products Used by Natural Resource Industries During the Period, 1997 - 1999

Percent of Total Sales by Industry

Canada, Innovators in Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Paper Manufacturing																
Firms with products used	18.2	A														
Of these, % that attributed sales to the following:																
Mining	47.3	B	27.6	B	0.0	A	5.1	A	0.0	A	0.0	A	0.0	A	67.3	B
Logging and forestry	97.6	A	16.1	A	5.1	A	3.9	A	3.9	A	16.3	B	33.3	B	19.3	B
Oil and gas extraction	44.9	B	29.1	B	0.0	A	5.4	A	5.7	A	0.0	A	0.0	A	59.8	B
Electrical utilities	47.4	B	27.6	B	0.0	A	5.1	A	0.0	A	0.0	A	0.0	A	67.4	B
Printing and Related Support Activities																
Firms with products used	14.2	A														
Of these, % that attributed sales to the following:																
Mining	72.2	B	78.7	B	6.0	B	0.0	A	0.0	A	0.0	A	0.0	A	15.4	B
Logging and forestry	85.0	B	60.9	C	11.2	B	6.1	B	0.0	A	0.0	A	0.0	A	21.8	B
Oil and gas extraction	78.6	B	50.0	C	9.0	B	9.5	B	2.4	B	0.0	A	0.0	A	29.1	B
Electrical utilities	83.0	B	60.7	C	4.9	B	9.5	B	0.0	A	0.0	A	0.0	A	24.9	B
Petroleum and Coal Products Manufacturing																
Firms with products used	41.5	A														
Of these, % that attributed sales to the following:																
Mining	94.1	A	81.3	A	12.5	A	0.0	A	6.3	A	0.0	A	0.0	A	0.0	A
Logging and forestry	76.5	A	61.5	A	38.5	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Oil and gas extraction	76.5	A	53.8	A	38.5	A	0.0	A	0.0	A	0.0	A	7.7	A	0.0	A
Electrical utilities	76.5	A	69.2	A	23.1	A	0.0	A	0.0	A	0.0	A	0.0	A	7.7	A
Chemical Manufacturing (excluding 3254)																
Firms with products used	31.1	A														
Of these, % that attributed sales to the following:																
Mining	73.9	B	46.6	B	17.7	B	8.8	B	0.0	A	1.2	A	8.4	A	17.2	A
Logging and forestry	77.1	B	32.7	B	19.9	B	8.5	B	1.4	A	3.3	A	15.7	A	18.5	A
Oil and gas extraction	68.6	B	50.4	B	16.9	B	7.7	A	0.0	A	0.0	A	6.4	A	18.6	B
Electrical utilities	60.6	B	49.3	B	9.8	B	4.2	A	0.0	A	0.0	A	2.7	A	34.0	B
Pharmaceutical and Medicine Manufacturing (3254)																
Firms with products used	0.0	A														
Of these, % that attributed sales to the following:																
Mining	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Logging and forestry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical utilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.2

Percent of Firms With Products Used by Natural Resource Industries During the Period, 1997 - 1999

Percent of Total Sales by Industry

Canada, Innovators in Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Plastics and Rubber Products Manufacturing																
Firms with products used	19.0	A														
Of these, % that attributed sales to the following:																
Mining	77.0	B	41.2	B	24.2	B	4.5	A	5.3	A	5.3	A	8.1	B	11.4	B
Logging and forestry	73.5	B	42.5	B	17.3	B	9.2	B	7.9	A	2.4	A	6.8	B	13.8	B
Oil and gas extraction	68.7	B	43.8	B	11.2	B	3.3	A	6.7	B	0.0	A	9.0	B	25.9	B
Electrical utilities	76.1	B	41.6	B	18.3	B	8.4	B	1.5	A	0.0	A	5.1	A	25.0	B
Non-Metallic Mineral Products Manufacturing																
Firms with products used	29.1	A														
Of these, % that attributed sales to the following:																
Mining	80.6	A	52.4	B	18.5	B	8.9	B	6.3	B	3.6	A	0.0	A	10.3	B
Logging and forestry	67.2	B	59.6	B	2.3	A	7.0	B	14.5	B	2.8	A	1.9	A	11.9	B
Oil and gas extraction	61.5	B	57.0	B	18.1	B	11.9	B	0.0	A	0.0	A	0.0	A	13.0	B
Electrical utilities	74.0	B	56.1	B	20.3	B	12.9	B	0.0	A	0.0	A	0.0	A	10.7	B
Primary Metal Manufacturing																
Firms with products used	50.2	A														
Of these, % that attributed sales to the following:																
Mining	79.3	A	47.5	B	21.6	B	6.4	A	3.9	A	7.1	A	5.2	A	8.3	A
Logging and forestry	66.2	B	37.9	B	21.4	A	9.6	A	5.4	A	0.0	A	1.9	A	23.7	B
Oil and gas extraction	72.7	A	30.2	B	21.0	B	8.3	A	6.0	A	10.1	A	3.4	A	20.9	B
Electrical utilities	70.1	A	39.0	B	16.2	B	6.2	A	6.1	A	0.0	A	4.3	A	28.2	B
Fabricated Metal Product Manufacturing																
Firms with products used	40.7	A														
Of these, % that attributed sales to the following:																
Mining	81.6	A	50.2	B	16.8	B	13.4	A	2.9	A	2.4	A	2.3	A	12.1	B
Logging and forestry	71.3	B	38.3	B	15.8	B	11.9	A	11.3	A	2.8	A	3.4	A	16.5	B
Oil and gas extraction	74.9	B	34.4	B	15.6	B	12.6	B	8.1	A	3.5	A	11.7	A	14.0	B
Electrical utilities	66.9	B	39.3	B	26.9	B	6.0	A	6.3	A	1.1	A	1.8	A	18.6	B
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)																
Firms with products used	45.0	A														
Of these, % that attributed sales to the following:																
Mining	64.1	B	31.3	B	9.9	A	1.8	A	7.0	A	3.7	A	13.1	A	33.3	B
Logging and forestry	81.3	A	23.0	B	4.2	A	2.9	A	5.8	A	1.5	A	34.2	B	28.4	B
Oil and gas extraction	59.0	B	22.5	B	2.2	A	8.0	A	4.1	A	2.1	A	36.4	B	24.7	B
Electrical utilities	48.2	B	23.0	B	7.2	A	4.6	A	2.2	A	0.0	A	0.0	A	62.9	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.2

Percent of Firms With Products Used by Natural Resource Industries During the Period, 1997 - 1999

Percent of Total Sales by Industry

Canada, Innovators in Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)																
Firms with products used	33.9	A														
Of these, % that attributed sales to the following:																
Mining	78.5	B	51.4	B	21.3	B	8.0	A	0.8	A	0.0	A	0.9	A	17.5	B
Logging and forestry	74.1	B	31.0	B	24.3	B	10.5	B	9.4	B	4.6	A	4.9	A	15.2	B
Oil and gas extraction	69.8	B	25.1	B	23.9	B	13.1	B	5.1	A	8.3	A	8.2	A	16.2	B
Electrical utilities	65.6	B	40.1	B	17.1	B	3.3	A	7.4	B	4.0	A	4.7	A	23.4	B
Computer and Peripheral Equipment Manufacturing																
Firms with products used	14.3	A														
Of these, % that attributed sales to the following:																
Mining	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Logging and forestry	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Oil and gas extraction	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Electrical utilities	x	A	x	C	x	A	x	A	x	A	x	A	x	A	x	A
Communications Equipment Manufacturing																
Firms with products used	20.1	B														
Of these, % that attributed sales to the following:																
Mining	82.2	B	32.5	C	23.7	C	0.0	A	0.0	A	0.0	A	0.0	A	43.7	C
Logging and forestry	44.9	C	x	B	x	A	x	A	x	A	x	A	0.0	A	x	B
Oil and gas extraction	73.9	B	48.2	C	11.1	A	12.1	B	14.3	B	0.0	A	0.0	A	14.3	B
Electrical utilities	91.8	A	48.6	C	30.2	B	0.0	A	11.5	B	0.0	A	9.7	B	0.0	A
Audio and Video Equipment Manufacturing																
Firms with products used	x	A														
Of these, % that attributed sales to the following:																
Mining	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Logging and forestry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical utilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Semiconductor and Other Electronic Equipment Manufacturing																
Firms with products used	13.3	A														
Of these, % that attributed sales to the following:																
Mining	x	C	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Logging and forestry	x	C	x	D	x	D	x	A	x	A	x	A	x	A	x	A
Oil and gas extraction	x	B	x	A	x	A	x	A	x	A	x	A	x	A	x	A
Electrical utilities	x	A	x	C	x	C	x	A	x	A	x	C	x	C	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.2

Percent of Firms With Products Used by Natural Resource Industries During the Period, 1997 - 1999

Percent of Total Sales by Industry

Canada, Innovators in Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media																
Firms with products used	32.2	B														
Of these, % that attributed sales to the following:																
Mining	53.3	B	21.2	B	44.5	B	16.3	B	5.2	A	0.0	A	0.0	A	12.8	A
Logging and forestry	48.2	B	19.1	B	11.0	A	28.9	B	0.0	A	7.1	B	14.4	B	19.5	B
Oil and gas extraction	48.6	B	27.2	B	12.7	B	11.9	B	13.3	B	11.5	B	23.5	B	0.0	A
Electrical utilities	79.8	B	18.8	B	18.4	B	7.4	B	6.9	A	0.0	A	33.2	B	15.2	A
Electrical Equipment, Appliance and Component Manufacturing																
Firms with products used	51.2	A														
Of these, % that attributed sales to the following:																
Mining	78.2	A	57.4	B	17.2	B	7.2	A	1.3	A	0.0	A	2.0	A	14.9	A
Logging and forestry	71.0	B	50.7	B	12.2	B	8.7	A	1.5	A	0.0	A	5.3	A	21.6	B
Oil and gas extraction	76.3	A	25.3	B	26.5	B	15.5	B	1.3	A	1.3	A	6.7	A	23.4	B
Electrical utilities	95.8	A	20.4	B	20.0	B	9.2	A	8.0	A	6.4	A	22.7	B	13.3	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing																
Firms with products used	26.5	A														
Of these, % that attributed sales to the following:																
Mining	77.1	B	50.7	B	18.4	B	6.6	A	3.5	A	0.0	A	0.0	A	20.7	B
Logging and forestry	75.1	B	32.7	B	13.1	A	17.9	B	8.2	A	2.4	A	7.8	B	17.9	B
Oil and gas extraction	73.0	B	32.2	B	19.1	B	8.7	B	12.3	B	2.1	A	5.2	A	20.4	B
Electrical utilities	69.4	B	42.1	B	3.9	A	5.1	A	2.6	A	11.3	B	0.0	A	35.0	B
Aerospace Product and Parts Manufacturing																
Firms with products used	15.9	A														
Of these, % that attributed sales to the following:																
Mining	45.6	B	x	C	x	A	x	C	x	A	x	A	x	A	x	D
Logging and forestry	66.7	B	x	B	x	B	x	C	x	A	x	A	x	A	x	C
Oil and gas extraction	57.8	B	x	C	x	C	x	C	x	A	x	A	x	A	x	A
Electrical utilities	78.9	B	55.5	C	28.8	C	0.0	A	0.0	A	0.0	A	0.0	A	15.7	C
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment																
Firms with products used	31.2	B														
Of these, % that attributed sales to the following:																
Mining	76.9	C	67.4	C	8.7	B	8.3	C	8.3	C	0.0	A	0.0	A	7.3	A
Logging and forestry	82.1	C	64.1	C	0.0	A	7.8	C	7.8	C	6.8	C	0.0	A	13.6	B
Oil and gas extraction	75.3	C	60.4	C	17.4	C	7.4	C	0.0	A	0.0	A	14.8	B	0.0	A
Electrical utilities	63.8	C	x	C	x	C	x	C	x	A	x	A	x	A	x	A
Furniture and Related Products Manufacturing																
Firms with products used	3.7	A														

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 23.2

Percent of Firms With Products Used by Natural Resource Industries During the Period, 1997 - 1999

Percent of Total Sales by Industry

Canada, Innovators in Manufacturing

			Percent of Total Sales													
			1 % to 5 %		6 % to 15 %		16 % to 25 %		26 % to 50 %		51 % to 75 %		76 % to 100 %		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Of these, % that attributed sales to the following:																
Mining	76.0	C	x	D	x	A	x	A	x	A	x	A	x	A	x	D
Logging and forestry	100.0	A	21.6	C	0.0	A	0.0	A	0.0	A	24.0	C	0.0	A	54.4	C
Oil and gas extraction	76.0	C	x	C	x	A	x	A	x	A	x	A	x	A	x	C
Electrical utilities	76.0	C	x	C	x	A	x	A	x	A	x	A	x	A	x	C
Miscellaneous Manufacturing																
Firms with products used	4.8	A														
Of these, % that attributed sales to the following:																
Mining	x	A	x	C	x	C	x	A	x	A	x	A	x	A	x	C
Logging and forestry	x	C	x	D	x	A	x	A	x	A	x	A	x	A	x	D
Oil and gas extraction	x	A	x	C	x	C	x	A	x	A	x	A	x	A	x	C
Electrical utilities	x	A	x	C	x	A	x	A	x	A	x	A	x	C	x	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 24

There are two tables for Question 24. Table 24.1 is for all manufacturing and Table 24.2 is for innovators in manufacturing.

The following contains an explanation of how to read the tables for Question 24 using Table 24.1, 'Total Manufacturing Industries', as an example.

In Table 24.1, for 'Total Manufacturing Industries', 58.6% of innovative firms indicated that they undertook R&D activities during the period, 1997 – 1999. Of these:

- 44.8% indicated that R&D is carried out by a separate and distinct R&D department, of which:
  - 58.3% indicated that this R&D was performed continuously; and
  - 41.7% indicated that this R&D was performed occasionally.
- 28.2% indicated that R&D is contracted out to other firms, of which:
  - 38.7% indicated that this R&D was performed continuously; and
  - 61.3% indicated that this R&D was performed occasionally.
- 15.0% indicated that R&D is both carried out by a separate and distinct R&D department and contracted out to other firms, of which:
  - 46.7% indicated that this R&D was performed continuously; and
  - 53.3% indicated that this R&D was performed occasionally.
- …and so on…

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Table 24.1
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, All Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries						
Firms who undertook R&D activities	58.6	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	44.8	A	58.3	A	41.7	A
Contracted out to other firms	28.2	A	38.7	A	61.3	A
Both carried out by a separate and distinct R&D department and contracted out to other firms	15.0	A	46.7	A	53.3	A
Only carried out by a separate and distinct R&D department	29.7	A	64.2	A	35.8	A
Only contracted out to other firms	13.2	A	29.7	A	70.3	A
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	42.0	A	-	-	-	-
Food Manufacturing						
Firms who undertook R&D activities	65.6	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	51.6	A	63.0	B	37.0	B
Contracted out to other firms	27.3	A	38.6	B	61.4	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	15.9	A	45.8	B	54.2	B
Only carried out by a separate and distinct R&D department	35.7	A	70.7	B	29.3	B
Only contracted out to other firms	11.4	A	28.5	B	71.5	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	37.0	A	-	-	-	-
Beverage and Tobacco Product Manufacturing						
Firms who undertook R&D activities	59.8	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	52.5	B	62.9	B	37.1	B
Contracted out to other firms	45.8	B	37.9	B	62.1	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	23.5	A	56.8	B	43.2	B
Only carried out by a separate and distinct R&D department	28.9	A	67.8	B	32.2	B
Only contracted out to other firms	22.3	A	17.9	B	82.1	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	25.2	A	-	-	-	-
Textile Mills						
Firms who undertook R&D activities	72.4	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	39.6	A	52.9	B	47.1	B
Contracted out to other firms	21.9	A	32.9	B	67.1	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	11.1	A	54.6	C	45.4	C
Only carried out by a separate and distinct R&D department	28.5	A	52.2	B	47.8	B
Only contracted out to other firms	10.7	A	10.4	B	89.6	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	49.6	A	-	-	-	-
Textile Product Mills						
Firms who undertook R&D activities	59.5	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	32.8	B	64.0	C	36.0	C
Contracted out to other firms	35.2	B	41.5	C	58.5	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	17.7	B	63.2	C	36.8	C
Only carried out by a separate and distinct R&D department	15.0	B	64.9	C	35.1	C
Only contracted out to other firms	17.5	B	x	C	x	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	49.8	B	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.1
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, All Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Clothing Manufacturing						
Firms who undertook R&D activities	34.2	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	35.6	B	72.1	B	27.9	B
Contracted out to other firms	13.6	A	68.1	C	31.9	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	8.3	A	62.6	C	37.4	C
Only carried out by a separate and distinct R&D department	27.3	B	75.0	B	25.0	B
Only contracted out to other firms	5.3	A	76.6	C	23.4	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	59.1	B	-	-	-	-
Leather and Allied Product Manufacturing						
Firms who undertook R&D activities	64.3	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	45.5	B	77.8	C	22.2	C
Contracted out to other firms	16.2	B	x	C	x	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	4.0	A	x	A	x	A
Only carried out by a separate and distinct R&D department	41.4	B	85.4	C	14.6	C
Only contracted out to other firms	12.1	B	x	C	x	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	42.4	B	-	-	-	-
Sawmills and Wood Preservation						
Firms who undertook R&D activities	42.9	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	30.4	A	43.0	B	57.0	B
Contracted out to other firms	44.8	B	33.6	B	66.4	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	14.1	A	31.5	B	68.5	B
Only carried out by a separate and distinct R&D department	16.3	A	52.9	B	47.1	B
Only contracted out to other firms	30.7	A	34.6	B	65.4	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	38.9	A	-	-	-	-
Veneer, Plywood and Engineered Wood Product Manufacturing						
Firms who undertook R&D activities	49.1	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	39.6	B	56.9	B	43.1	B
Contracted out to other firms	44.8	B	47.2	B	52.8	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	22.4	B	67.4	B	32.6	B
Only carried out by a separate and distinct R&D department	17.2	A	43.1	B	56.9	B
Only contracted out to other firms	22.4	B	27.1	B	72.9	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	38.0	B	-	-	-	-
Other Wood Product Manufacturing						
Firms who undertook R&D activities	45.9	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	25.3	B	55.4	B	44.6	B
Contracted out to other firms	25.2	B	31.0	B	69.0	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	8.0	A	38.9	C	61.1	C
Only carried out by a separate and distinct R&D department	17.3	B	62.9	C	37.1	C
Only contracted out to other firms	17.2	A	27.3	B	72.7	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	57.5	B	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.1
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, All Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Paper Manufacturing						
Firms who undertook R&D activities	60.9	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	52.3	A	59.8	B	40.2	B
Contracted out to other firms	35.4	A	45.7	B	54.3	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	18.7	A	48.7	B	51.3	B
Only carried out by a separate and distinct R&D department	33.6	A	66.0	B	34.0	B
Only contracted out to other firms	16.7	A	42.3	B	57.7	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	31.0	A	-	-	-	-
Printing and Related Support Activities						
Firms who undertook R&D activities	33.7	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	34.6	B	52.4	C	47.6	C
Contracted out to other firms	18.6	B	32.5	C	67.5	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	12.6	B	38.0	C	62.0	C
Only carried out by a separate and distinct R&D department	21.9	B	60.7	C	39.3	C
Only contracted out to other firms	6.0	A	...	D	...	D
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	59.4	B	-	-	-	-
Petroleum and Coal Products Manufacturing						
Firms who undertook R&D activities	69.4	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	54.7	A	61.0	A	39.0	A
Contracted out to other firms	34.7	A	38.5	A	61.5	A
Both carried out by a separate and distinct R&D department and contracted out to other firms	18.7	A	57.1	A	42.9	A
Only carried out by a separate and distinct R&D department	36.0	A	63.0	A	37.0	A
Only contracted out to other firms	16.0	A	x	A	x	A
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	29.3	A	-	-	-	-
Chemical Manufacturing (excluding 3254)						
Firms who undertook R&D activities	75.2	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	64.5	A	65.4	A	34.6	A
Contracted out to other firms	29.8	A	39.7	B	60.3	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	19.4	A	49.2	B	50.8	B
Only carried out by a separate and distinct R&D department	45.1	A	72.3	A	27.7	A
Only contracted out to other firms	10.5	A	22.2	B	77.8	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	25.1	A	-	-	-	-
Pharmaceutical and Medicine Manufacturing (3254)						
Firms who undertook R&D activities	83.9	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	80.5	B	68.5	B	31.5	B
Contracted out to other firms	49.8	B	55.8	B	44.2	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	45.0	B	57.0	B	43.0	B
Only carried out by a separate and distinct R&D department	35.5	B	83.0	B	17.0	B
Only contracted out to other firms	4.9	A	x	D	x	D
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	14.6	A	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.1
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, All Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Plastics and Rubber Products Manufacturing						
Firms who undertook R&D activities	67.9	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	46.5	A	58.3	B	41.7	B
Contracted out to other firms	26.5	A	19.5	B	80.5	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	13.1	A	30.8	B	69.2	B
Only carried out by a separate and distinct R&D department	33.4	A	69.0	B	31.0	B
Only contracted out to other firms	13.5	A	8.5	A	91.5	A
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	40.1	A	-	-	-	-
Non-Metallic Mineral Products Manufacturing						
Firms who undertook R&D activities	57.0	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	39.5	A	59.2	B	40.8	B
Contracted out to other firms	27.2	A	42.9	B	57.1	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	13.8	A	42.7	B	57.3	B
Only carried out by a separate and distinct R&D department	25.7	A	68.0	B	32.0	B
Only contracted out to other firms	13.5	A	43.0	B	57.0	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	47.0	A	-	-	-	-
Primary Metal Manufacturing						
Firms who undertook R&D activities	63.9	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	39.5	A	46.1	B	53.9	B
Contracted out to other firms	35.8	A	22.8	B	77.2	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	17.0	A	32.7	B	67.3	B
Only carried out by a separate and distinct R&D department	22.5	A	56.3	B	43.7	B
Only contracted out to other firms	18.7	A	13.8	B	86.2	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	41.8	A	-	-	-	-
Fabricated Metal Product Manufacturing						
Firms who undertook R&D activities	50.8	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	36.2	B	51.3	B	48.7	B
Contracted out to other firms	26.1	B	42.2	B	57.8	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	10.7	A	51.4	C	48.6	C
Only carried out by a separate and distinct R&D department	25.5	B	51.2	B	48.8	B
Only contracted out to other firms	15.5	A	35.8	B	64.2	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	48.4	B	-	-	-	-
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)						
Firms who undertook R&D activities	80.4	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	41.7	A	50.4	B	49.6	B
Contracted out to other firms	28.1	A	25.2	B	74.8	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	18.3	A	29.2	B	70.8	B
Only carried out by a separate and distinct R&D department	23.4	A	67.1	B	32.9	B
Only contracted out to other firms	9.7	A	17.8	B	82.2	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	48.5	A	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.1
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, All Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)						
Firms who undertook R&D activities	75.9	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	41.6	B	54.8	B	45.2	B
Contracted out to other firms	27.8	A	39.3	B	60.7	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	16.5	A	45.7	B	54.3	B
Only carried out by a separate and distinct R&D department	25.0	A	60.7	B	39.3	B
Only contracted out to other firms	11.3	A	29.9	B	70.1	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	47.1	B	-	-	-	-
Computer and Peripheral Equipment Manufacturing						
Firms who undertook R&D activities	87.2	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	63.3	B	79.9	A	20.1	A
Contracted out to other firms	35.5	B	78.4	A	21.6	A
Both carried out by a separate and distinct R&D department and contracted out to other firms	26.8	A	81.0	A	19.0	A
Only carried out by a separate and distinct R&D department	36.5	B	79.1	A	20.9	A
Only contracted out to other firms	8.7	B	x	C	x	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	28.0	B	-	-	-	-
Communications Equipment Manufacturing						
Firms who undertook R&D activities	91.1	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	66.1	B	49.6	B	50.4	B
Contracted out to other firms	31.4	B	35.7	B	64.3	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	23.8	A	38.1	B	61.9	B
Only carried out by a separate and distinct R&D department	42.2	B	56.0	B	44.0	B
Only contracted out to other firms	7.6	A	x	C	x	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	26.3	A	-	-	-	-
Audio and Video Equipment Manufacturing						
Firms who undertook R&D activities	x	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	x	A	x	A	x	A
Contracted out to other firms	x	A	x	A	x	A
Both carried out by a separate and distinct R&D department and contracted out to other firms	x	A	x	A	x	A
Only carried out by a separate and distinct R&D department	x	A	x	A	x	A
Only contracted out to other firms	x	A	x	A	x	A
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	x	A	-	-	-	-
Semiconductor and Other Electronic Equipment Manufacturing						
Firms who undertook R&D activities	81.3	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	64.4	B	67.8	B	32.2	B
Contracted out to other firms	34.9	B	62.6	B	37.4	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	32.3	B	59.7	B	40.3	B
Only carried out by a separate and distinct R&D department	32.0	B	76.0	B	24.0	B
Only contracted out to other firms	2.5	A	x	A	x	A
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	33.1	B	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.1
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, All Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media						
Firms who undertook R&D activities	77.3	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	63.7	B	42.5	B	57.5	B
Contracted out to other firms	37.7	B	41.5	B	58.5	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	27.9	B	35.9	B	64.1	B
Only carried out by a separate and distinct R&D department	35.8	B	47.7	B	52.3	B
Only contracted out to other firms	9.9	A	57.2	C	42.8	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	26.5	B	-	-	-	-
Electrical Equipment, Appliance and Component Manufacturing						
Firms who undertook R&D activities	74.2	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	59.9	A	66.7	B	33.3	B
Contracted out to other firms	33.8	A	47.2	B	52.8	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	22.0	A	58.9	B	41.1	B
Only carried out by a separate and distinct R&D department	37.9	A	71.3	B	28.7	B
Only contracted out to other firms	11.7	A	25.2	B	74.8	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	28.4	A	-	-	-	-
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing						
Firms who undertook R&D activities	64.6	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	51.0	B	64.3	B	35.7	B
Contracted out to other firms	26.3	B	39.7	B	60.3	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	12.9	A	60.4	C	39.6	C
Only carried out by a separate and distinct R&D department	38.1	B	65.7	B	34.3	B
Only contracted out to other firms	13.4	A	19.9	B	80.1	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	35.6	B	-	-	-	-
Aerospace Product and Parts Manufacturing						
Firms who undertook R&D activities	67.2	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	45.1	B	78.3	B	21.7	B
Contracted out to other firms	27.2	B	42.5	C	57.5	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	9.7	B	x	D	x	D
Only carried out by a separate and distinct R&D department	35.4	B	86.1	B	13.9	B
Only contracted out to other firms	17.5	B	38.1	C	61.9	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	37.4	B	-	-	-	-
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment						
Firms who undertook R&D activities	63.1	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	28.1	B	68.6	C	31.4	C
Contracted out to other firms	29.0	B	29.4	C	70.6	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	11.2	B	x	D	x	D
Only carried out by a separate and distinct R&D department	16.9	B	x	B	x	B
Only contracted out to other firms	17.8	B	23.1	C	76.9	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	54.1	B	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.1
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, All Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing						
Firms who undertook R&D activities	47.4	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	39.3	B	32.0	B	68.0	B
Contracted out to other firms	23.8	B	23.5	B	76.5	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	9.6	A	23.5	C	76.5	C
Only carried out by a separate and distinct R&D department	29.7	B	34.8	B	65.2	B
Only contracted out to other firms	14.2	A	23.5	C	76.5	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	46.5	B	-	-	-	-
Miscellaneous Manufacturing						
Firms who undertook R&D activities	54.4	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	36.6	B	69.4	B	30.6	B
Contracted out to other firms	23.3	B	53.4	C	46.6	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	7.7	A	69.4	C	30.6	C
Only carried out by a separate and distinct R&D department	28.9	B	69.4	B	30.6	B
Only contracted out to other firms	15.5	B	45.4	C	54.6	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	47.8	B	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.2
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, Innovators in Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries						
Firms who undertook R&D activities	67.5	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	45.2	A	59.1	A	40.9	A
Contracted out to other firms	28.5	A	39.6	A	60.4	A
Both carried out by a separate and distinct R&D department and contracted out to other firms	15.6	A	47.3	A	52.7	A
Only carried out by a separate and distinct R&D department	29.6	A	65.3	A	34.7	A
Only contracted out to other firms	12.9	A	30.3	A	69.7	A
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	41.9	A	-	-	-	-
Food Manufacturing						
Firms who undertook R&D activities	74.5	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	53.7	A	64.6	B	35.4	B
Contracted out to other firms	25.6	A	36.3	B	63.7	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	16.3	A	46.2	B	53.8	B
Only carried out by a separate and distinct R&D department	37.4	A	72.6	B	27.4	B
Only contracted out to other firms	9.3	A	18.9	B	81.1	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	37.0	A	-	-	-	-
Beverage and Tobacco Product Manufacturing						
Firms who undertook R&D activities	68.7	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	52.2	B	57.6	B	42.4	B
Contracted out to other firms	45.9	B	42.9	B	57.1	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	26.7	A	56.8	B	43.2	B
Only carried out by a separate and distinct R&D department	25.5	A	58.5	B	41.5	B
Only contracted out to other firms	19.2	A	23.6	B	76.4	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	28.7	A	-	-	-	-
Textile Mills						
Firms who undertook R&D activities	83.6	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	40.0	A	52.9	B	47.1	B
Contracted out to other firms	22.1	A	32.9	B	67.1	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	11.2	A	54.6	C	45.4	C
Only carried out by a separate and distinct R&D department	28.8	A	52.2	B	47.8	B
Only contracted out to other firms	10.8	A	10.4	B	89.6	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	49.1	A	-	-	-	-
Textile Product Mills						
Firms who undertook R&D activities	67.8	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	32.0	B	61.3	C	38.7	C
Contracted out to other firms	37.0	B	41.5	C	58.5	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	18.6	B	63.2	C	36.8	C
Only carried out by a separate and distinct R&D department	13.4	B	58.6	C	41.4	C
Only contracted out to other firms	18.4	B	x	C	x	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	49.6	B	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.2
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, Innovators in Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Clothing Manufacturing						
Firms who undertook R&D activities	43.3	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	31.9	B	71.5	B	28.5	B
Contracted out to other firms	11.9	A	76.7	C	23.3	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	6.5	A	x	C	x	C
Only carried out by a separate and distinct R&D department	25.3	B	69.6	B	30.4	B
Only contracted out to other firms	5.4	A	x	C	x	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	62.7	B	-	-	-	-
Leather and Allied Product Manufacturing						
Firms who undertook R&D activities	73.9	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	43.1	B	83.0	B	17.0	B
Contracted out to other firms	19.5	B	x	C	x	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	4.9	A	x	A	x	A
Only carried out by a separate and distinct R&D department	38.2	B	93.6	B	6.4	B
Only contracted out to other firms	14.6	B	x	C	x	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	42.3	B	-	-	-	-
Sawmills and Wood Preservation						
Firms who undertook R&D activities	52.6	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	30.7	B	44.2	B	55.8	B
Contracted out to other firms	44.6	B	32.0	B	68.0	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	14.5	A	33.9	C	66.1	C
Only carried out by a separate and distinct R&D department	16.2	A	53.5	B	46.5	B
Only contracted out to other firms	30.1	A	31.0	B	69.0	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	39.2	B	-	-	-	-
Veneer, Plywood and Engineered Wood Product Manufacturing						
Firms who undertook R&D activities	63.9	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	40.6	B	65.8	B	34.2	B
Contracted out to other firms	46.3	B	54.3	B	45.7	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	22.3	B	80.2	B	19.8	B
Only carried out by a separate and distinct R&D department	18.3	B	48.1	C	51.9	C
Only contracted out to other firms	23.9	B	30.1	B	69.9	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	35.4	B	-	-	-	-
Other Wood Product Manufacturing						
Firms who undertook R&D activities	54.8	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	25.4	B	59.9	B	40.1	B
Contracted out to other firms	26.6	B	31.9	B	68.1	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	8.7	A	38.9	C	61.1	C
Only carried out by a separate and distinct R&D department	16.7	B	70.8	C	29.2	C
Only contracted out to other firms	17.9	A	28.5	B	71.5	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	56.7	B	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.2
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, Innovators in Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Paper Manufacturing						
Firms who undertook R&D activities	68.9	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	53.2	A	57.7	B	42.3	B
Contracted out to other firms	37.4	A	45.4	B	54.6	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	19.8	A	48.7	B	51.3	B
Only carried out by a separate and distinct R&D department	33.4	A	63.0	B	37.0	B
Only contracted out to other firms	17.6	A	41.6	B	58.4	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	29.2	A	-	-	-	-
Printing and Related Support Activities						
Firms who undertook R&D activities	39.5	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	34.2	B	51.7	C	48.3	C
Contracted out to other firms	18.7	B	32.5	C	67.5	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	12.7	B	38.0	C	62.0	C
Only carried out by a separate and distinct R&D department	21.5	B	59.7	C	40.3	C
Only contracted out to other firms	6.1	A	...	D	...	D
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	59.7	B	-	-	-	-
Petroleum and Coal Products Manufacturing						
Firms who undertook R&D activities	75.6	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	54.8	A	64.7	A	35.3	A
Contracted out to other firms	29.0	A	44.4	A	55.6	A
Both carried out by a separate and distinct R&D department and contracted out to other firms	19.4	A	x	A	x	A
Only carried out by a separate and distinct R&D department	35.5	A	63.6	A	36.4	A
Only contracted out to other firms	9.7	A	x	A	x	A
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	35.5	A	-	-	-	-
Chemical Manufacturing (excluding 3254)						
Firms who undertook R&D activities	81.1	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	64.2	A	65.8	A	34.2	A
Contracted out to other firms	29.6	A	39.5	B	60.5	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	19.6	A	47.0	B	53.0	B
Only carried out by a separate and distinct R&D department	44.6	A	74.0	A	26.0	A
Only contracted out to other firms	10.0	A	24.7	B	75.3	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	25.8	A	-	-	-	-
Pharmaceutical and Medicine Manufacturing (3254)						
Firms who undertook R&D activities	91.0	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	79.2	B	71.4	B	28.6	B
Contracted out to other firms	50.9	B	53.8	B	46.2	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	45.6	B	54.9	B	45.1	B
Only carried out by a separate and distinct R&D department	33.5	B	93.9	A	6.1	A
Only contracted out to other firms	5.2	A	x	D	x	D
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	15.6	B	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.2
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, Innovators in Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Plastics and Rubber Products Manufacturing						
Firms who undertook R&D activities	74.7	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	47.8	A	58.2	B	41.8	B
Contracted out to other firms	26.8	A	20.4	B	79.6	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	13.8	A	30.8	B	69.2	B
Only carried out by a separate and distinct R&D department	33.9	A	69.4	B	30.6	B
Only contracted out to other firms	12.9	A	9.3	B	90.7	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	39.3	A	-	-	-	-
Non-Metallic Mineral Products Manufacturing						
Firms who undertook R&D activities	67.6	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	40.1	B	66.2	B	33.8	B
Contracted out to other firms	28.4	A	46.0	B	54.0	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	13.8	A	49.8	B	50.2	B
Only carried out by a separate and distinct R&D department	26.2	B	74.9	B	25.1	B
Only contracted out to other firms	14.6	A	42.4	B	57.6	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	45.4	B	-	-	-	-
Primary Metal Manufacturing						
Firms who undertook R&D activities	73.0	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	39.3	A	45.1	B	54.9	B
Contracted out to other firms	35.8	A	26.3	B	73.7	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	17.6	A	36.6	B	63.4	B
Only carried out by a separate and distinct R&D department	21.7	A	52.0	B	48.0	B
Only contracted out to other firms	18.2	A	16.5	B	83.5	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	42.5	A	-	-	-	-
Fabricated Metal Product Manufacturing						
Firms who undertook R&D activities	61.7	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	34.8	B	51.7	B	48.3	B
Contracted out to other firms	28.2	B	43.4	B	56.6	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	11.3	A	53.7	C	46.3	C
Only carried out by a separate and distinct R&D department	23.4	B	50.8	B	49.2	B
Only contracted out to other firms	16.9	A	36.5	B	63.5	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	48.4	B	-	-	-	-
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)						
Firms who undertook R&D activities	88.0	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	42.7	A	51.2	B	48.8	B
Contracted out to other firms	28.6	A	25.7	B	74.3	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	19.1	A	29.2	B	70.8	B
Only carried out by a separate and distinct R&D department	23.6	A	68.9	B	31.1	B
Only contracted out to other firms	9.5	A	18.9	B	81.1	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	47.8	A	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.2
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, Innovators in Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Machinery Manufacturing (excluding 3331 & 3332)						
Firms who undertook R&D activities	82.0	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	43.2	B	55.4	B	44.6	B
Contracted out to other firms	28.5	B	39.8	B	60.2	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	17.3	A	44.8	B	55.2	B
Only carried out by a separate and distinct R&D department	25.9	B	62.5	B	37.5	B
Only contracted out to other firms	11.2	A	32.2	B	67.8	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	45.7	B	-	-	-	-
Computer and Peripheral Equipment Manufacturing						
Firms who undertook R&D activities	86.6	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	64.0	B	83.2	A	16.8	A
Contracted out to other firms	37.4	B	78.4	A	21.6	A
Both carried out by a separate and distinct R&D department and contracted out to other firms	28.2	B	81.0	A	19.0	A
Only carried out by a separate and distinct R&D department	35.8	B	85.0	A	15.0	A
Only contracted out to other firms	9.2	B	x	C	x	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	26.8	B	-	-	-	-
Communications Equipment Manufacturing						
Firms who undertook R&D activities	91.9	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	66.9	B	50.3	B	49.7	B
Contracted out to other firms	32.2	B	37.7	B	62.3	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	25.8	B	38.1	B	61.9	B
Only carried out by a separate and distinct R&D department	41.1	B	58.0	B	42.0	B
Only contracted out to other firms	6.4	A	x	C	x	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	26.7	B	-	-	-	-
Audio and Video Equipment Manufacturing						
Firms who undertook R&D activities	x	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	x	A	x	A	x	A
Contracted out to other firms	x	A	x	A	x	A
Both carried out by a separate and distinct R&D department and contracted out to other firms	x	A	x	A	x	A
Only carried out by a separate and distinct R&D department	x	A	x	A	x	A
Only contracted out to other firms	x	A	x	A	x	A
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	x	A	-	-	-	-
Semiconductor and Other Electronic Equipment Manufacturing						
Firms who undertook R&D activities	80.2	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	68.7	B	67.8	B	32.2	B
Contracted out to other firms	37.2	B	62.6	B	37.4	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	34.5	B	59.7	B	40.3	B
Only carried out by a separate and distinct R&D department	34.2	B	76.0	B	24.0	B
Only contracted out to other firms	2.7	A	x	A	x	A
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	28.6	B	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.2
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, Innovators in Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media						
Firms who undertook R&D activities	**84.7**	**B**				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	63.7	B	42.5	B	57.5	B
Contracted out to other firms	37.7	B	41.5	B	58.5	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	27.9	B	35.9	B	64.1	B
Only carried out by a separate and distinct R&D department	35.8	B	47.7	B	52.3	B
Only contracted out to other firms	9.9	A	57.2	C	42.8	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	26.5	B	-	-	-	-
Electrical Equipment, Appliance and Component Manufacturing						
Firms who undertook R&D activities	**80.3**	**A**				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	60.3	B	68.2	B	31.8	B
Contracted out to other firms	33.8	A	48.6	B	51.4	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	22.7	A	58.9	B	41.1	B
Only carried out by a separate and distinct R&D department	37.7	B	73.8	B	26.2	B
Only contracted out to other firms	11.1	A	27.4	B	72.6	B
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	28.6	A	-	-	-	-
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing						
Firms who undertook R&D activities	**72.9**	**A**				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	53.3	B	61.6	B	38.4	B
Contracted out to other firms	25.3	B	44.2	B	55.8	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	13.9	A	58.7	C	41.3	C
Only carried out by a separate and distinct R&D department	39.4	B	62.6	B	37.4	B
Only contracted out to other firms	11.4	A	26.5	C	73.5	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	35.3	B	-	-	-	-
Aerospace Product and Parts Manufacturing						
Firms who undertook R&D activities	**76.4**	**B**				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	44.7	B	82.9	B	17.1	B
Contracted out to other firms	26.3	B	46.0	C	54.0	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	10.2	B	x	D	x	D
Only carried out by a separate and distinct R&D department	34.5	B	92.5	B	7.5	B
Only contracted out to other firms	16.1	B	x	C	x	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	39.2	B	-	-	-	-
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment						
Firms who undertook R&D activities	**74.6**	**B**				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	31.8	B	68.6	C	31.4	C
Contracted out to other firms	29.0	B	33.3	C	66.7	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	12.7	B	x	D	x	D
Only carried out by a separate and distinct R&D department	19.1	B	x	B	x	B
Only contracted out to other firms	16.3	B	x	C	x	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	51.9	B	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 24.2
Research and Development During the Period 1997-1999
Industry by R&D Activity
Canada, Innovators in Manufacturing

			R&D Was Performed			
			Continuously		Occasionally	
	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing						
Firms who undertook R&D activities	55.5	A				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	40.5	B	32.4	B	67.6	B
Contracted out to other firms	24.8	B	23.5	B	76.5	B
Both carried out by a separate and distinct R&D department and contracted out to other firms	10.0	A	23.5	C	76.5	C
Only carried out by a separate and distinct R&D department	30.4	B	35.3	B	64.7	B
Only contracted out to other firms	14.8	A	23.5	C	76.5	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	44.7	B	-	-	-	-
Miscellaneous Manufacturing						
Firms who undertook R&D activities	63.7	B				
Of these, % for whom R&D is:						
Carried out by a separate and distinct R&D department	36.0	B	73.5	B	26.5	B
Contracted out to other firms	22.9	B	56.5	C	43.5	C
Both carried out by a separate and distinct R&D department and contracted out to other firms	8.0	A	69.4	C	30.6	C
Only carried out by a separate and distinct R&D department	27.9	B	74.6	B	25.4	B
Only contracted out to other firms	14.8	B	49.4	C	50.6	C
Neither carried out by a separate and distinct R&D department nor contracted out to other firms	49.2	B	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 25

There are two tables for Question 25. Table 25.1 is for all manufacturing and Table 25.2 is for innovators in manufacturing.

The following contains an explanation of how to read the tables for Question 25 using Table 25.1, 'Total Manufacturing Industries', as an example.

In Table 25.1, for 'Total Manufacturing Industries', 66.1% of firms indicated that they used the listed methods to protect their intellectual property during the period, 1997 – 1999. Of these:

- 38.4% used patents;
- 54.5% used trademarks;
- 18.1% used copyrights;
- 65.3% used confidentiality agreements;
- 37.3% used trade secrets; and
- 3.8% listed another method.

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Table 25.1
Methods Used to Protect Intellectual Property During the Period 1997-1999
Industry by Method
Canada, All Manufacturing

	Percent	Reliability
Total Manufacturing Industries		
Firms that protected intellectual property	66.1	A
Of these, % that used:		
Patents	38.4	A
Trademarks	54.5	A
Copyrights	18.1	A
Confidentiality agreements	65.3	A
Trade secrets	37.3	A
Other	3.8	A
Food Manufacturing		
Firms that protected intellectual property	71.2	A
Of these, % that used:		
Patents	20.2	A
Trademarks	72.6	A
Copyrights	16.7	A
Confidentiality agreements	68.0	A
Trade secrets	44.7	A
Other	3.3	A
Beverage and Tobacco Product Manufacturing		
Firms that protected intellectual property	81.3	A
Of these, % that used:		
Patents	32.9	A
Trademarks	81.7	A
Copyrights	31.9	A
Confidentiality agreements	70.8	A
Trade secrets	47.6	A
Other	7.2	A
Textile Mills		
Firms that protected intellectual property	61.3	A
Of these, % that used:		
Patents	24.9	A
Trademarks	49.9	B
Copyrights	22.0	A
Confidentiality agreements	62.2	A
Trade secrets	52.4	A
Other	4.3	A
Textile Product Mills		
Firms that protected intellectual property	72.3	B
Of these, % that used:		
Patents	43.9	B
Trademarks	82.1	B
Copyrights	21.2	B
Confidentiality agreements	46.7	B
Trade secrets	25.3	B
Other	0.0	A
Clothing Manufacturing		
Firms that protected intellectual property	62.5	A
Of these, % that used:		
Patents	12.0	A
Trademarks	83.9	A
Copyrights	10.1	A
Confidentiality agreements	31.8	A
Trade secrets	25.7	A
Other	1.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 25.1

Methods Used to Protect Intellectual Property During the Period 1997-1999

Industry by Method

Canada, All Manufacturing

	Percent	Reliability
Leather and Allied Product Manufacturing		
Firms that protected intellectual property	81.8	B
Of these, % that used:		
Patents	25.9	B
Trademarks	67.2	B
Copyrights	7.4	A
Confidentiality agreements	23.0	B
Trade secrets	32.5	B
Other	0.0	A
Sawmills and Wood Preservation		
Firms that protected intellectual property	38.9	A
Of these, % that used:		
Patents	14.0	A
Trademarks	41.4	B
Copyrights	7.9	A
Confidentiality agreements	52.6	B
Trade secrets	27.4	A
Other	9.5	A
Veneer, Plywood and Engineered Wood Product Manufacturing		
Firms that protected intellectual property	42.4	B
Of these, % that used:		
Patents	33.0	B
Trademarks	46.9	B
Copyrights	9.0	A
Confidentiality agreements	53.5	B
Trade secrets	29.3	B
Other	2.2	A
Other Wood Product Manufacturing		
Firms that protected intellectual property	39.6	A
Of these, % that used:		
Patents	18.8	B
Trademarks	45.0	B
Copyrights	4.4	A
Confidentiality agreements	49.5	B
Trade secrets	31.8	B
Other	7.6	A
Paper Manufacturing		
Firms that protected intellectual property	84.1	A
Of these, % that used:		
Patents	35.3	A
Trademarks	42.2	A
Copyrights	11.0	A
Confidentiality agreements	72.6	A
Trade secrets	31.8	A
Other	2.3	A
Printing and Related Support Activities		
Firms that protected intellectual property	55.7	A
Of these, % that used:		
Patents	20.6	B
Trademarks	39.9	B
Copyrights	27.9	B
Confidentiality agreements	69.3	B
Trade secrets	31.8	B
Other	4.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 25.1
Methods Used to Protect Intellectual Property During the Period 1997-1999
Industry by Method
Canada, All Manufacturing

	Percent	Reliability
Petroleum and Coal Products Manufacturing		
Firms that protected intellectual property	**82.4**	**A**
Of these, % that used:		
Patents	29.2	A
Trademarks	51.7	A
Copyrights	13.5	A
Confidentiality agreements	75.3	A
Trade secrets	61.8	A
Other	4.5	A
Chemical Manufacturing (excluding 3254)		
Firms that protected intellectual property	**82.4**	**A**
Of these, % that used:		
Patents	47.5	A
Trademarks	64.7	A
Copyrights	19.2	A
Confidentiality agreements	80.9	A
Trade secrets	54.0	A
Other	2.8	A
Pharmaceutical and Medicine Manufacturing (3254)		
Firms that protected intellectual property	**90.7**	**A**
Of these, % that used:		
Patents	55.3	A
Trademarks	75.7	A
Copyrights	31.2	A
Confidentiality agreements	93.8	A
Trade secrets	53.8	A
Other	0.0	A
Plastics and Rubber Products Manufacturing		
Firms that protected intellectual property	**78.2**	**A**
Of these, % that used:		
Patents	50.0	A
Trademarks	51.7	A
Copyrights	15.1	A
Confidentiality agreements	67.0	A
Trade secrets	39.8	A
Other	4.3	A
Non-Metallic Mineral Products Manufacturing		
Firms that protected intellectual property	**58.2**	**A**
Of these, % that used:		
Patents	48.2	A
Trademarks	50.8	B
Copyrights	16.6	A
Confidentiality agreements	54.6	A
Trade secrets	43.6	B
Other	8.0	A
Primary Metal Manufacturing		
Firms that protected intellectual property	**60.9**	**A**
Of these, % that used:		
Patents	34.6	A
Trademarks	30.4	A
Copyrights	14.7	A
Confidentiality agreements	74.7	A
Trade secrets	51.7	A
Other	0.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 25.1
Methods Used to Protect Intellectual Property During the Period 1997-1999
Industry by Method
Canada, All Manufacturing

	Percent	Reliability
Fabricated Metal Product Manufacturing		
Firms that protected intellectual property	**61.3**	**A**
Of these, % that used:		
Patents	35.0	B
Trademarks	41.1	B
Copyrights	12.8	A
Confidentiality agreements	67.6	A
Trade secrets	31.8	A
Other	4.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)		
Firms that protected intellectual property	**79.0**	**A**
Of these, % that used:		
Patents	68.8	A
Trademarks	53.8	A
Copyrights	19.3	A
Confidentiality agreements	73.3	A
Trade secrets	30.2	A
Other	0.0	A
Machinery Manufacturing (excluding 3331 & 3332)		
Firms that protected intellectual property	**77.1**	**A**
Of these, % that used:		
Patents	53.2	B
Trademarks	47.2	B
Copyrights	17.6	A
Confidentiality agreements	66.6	B
Trade secrets	31.8	B
Other	4.5	A
Computer and Peripheral Equipment Manufacturing		
Firms that protected intellectual property	**92.2**	**A**
Of these, % that used:		
Patents	44.8	B
Trademarks	68.5	B
Copyrights	50.2	B
Confidentiality agreements	90.4	A
Trade secrets	41.8	B
Other	7.2	A
Communications Equipment Manufacturing		
Firms that protected intellectual property	**92.6**	**A**
Of these, % that used:		
Patents	53.4	B
Trademarks	50.1	B
Copyrights	27.6	A
Confidentiality agreements	89.9	A
Trade secrets	42.8	B
Other	3.3	A
Audio and Video Equipment Manufacturing		
Firms that protected intellectual property	**x**	**A**
Of these, % that used:		
Patents	x	A
Trademarks	x	A
Copyrights	x	A
Confidentiality agreements	x	A
Trade secrets	x	A
Other	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 25.1
Methods Used to Protect Intellectual Property During the Period 1997-1999
Industry by Method
Canada, All Manufacturing

	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing		
Firms that protected intellectual property	**85.6**	**A**
Of these, % that used:		
Patents	47.7	B
Trademarks	46.1	B
Copyrights	30.6	B
Confidentiality agreements	86.7	B
Trade secrets	62.4	B
Other	10.9	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media		
Firms that protected intellectual property	**84.3**	**A**
Of these, % that used:		
Patents	54.6	B
Trademarks	52.8	B
Copyrights	32.0	B
Confidentiality agreements	80.3	A
Trade secrets	38.5	B
Other	3.2	A
Electrical Equipment, Appliance and Component Manufacturing		
Firms that protected intellectual property	**71.6**	**A**
Of these, % that used:		
Patents	66.4	A
Trademarks	55.1	B
Copyrights	22.4	A
Confidentiality agreements	70.5	A
Trade secrets	35.7	B
Other	5.8	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing		
Firms that protected intellectual property	**67.8**	**A**
Of these, % that used:		
Patents	47.8	B
Trademarks	39.2	B
Copyrights	19.9	A
Confidentiality agreements	73.3	A
Trade secrets	39.2	B
Other	3.2	A
Aerospace Product and Parts Manufacturing		
Firms that protected intellectual property	**78.9**	**B**
Of these, % that used:		
Patents	39.8	B
Trademarks	29.4	B
Copyrights	29.6	B
Confidentiality agreements	83.5	A
Trade secrets	43.5	B
Other	12.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 25.1
Methods Used to Protect Intellectual Property During the Period 1997-1999
Industry by Method
Canada, All Manufacturing

	Percent	Reliability
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment		
Firms that protected intellectual property	60.9	B
Of these, % that used:		
Patents	34.4	B
Trademarks	35.9	B
Copyrights	20.7	B
Confidentiality agreements	63.6	B
Trade secrets	30.6	B
Other	4.3	B
Furniture and Related Products Manufacturing		
Firms that protected intellectual property	57.5	A
Of these, % that used:		
Patents	40.2	B
Trademarks	62.2	B
Copyrights	15.9	A
Confidentiality agreements	52.5	B
Trade secrets	24.8	B
Other	3.2	A
Miscellaneous Manufacturing		
Firms that protected intellectual property	66.5	A
Of these, % that used:		
Patents	47.8	B
Trademarks	62.1	B
Copyrights	32.3	B
Confidentiality agreements	61.9	B
Trade secrets	40.7	B
Other	3.7	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 25.2

Methods Used to Protect Intellectual Property During the Period 1997-1999

Industry by Method

Canada, Innovators in Manufacturing

	Percent	Reliability
Total Manufacturing Industries		
Firms that protected intellectual property	**72.6**	**A**
Of these, % that used:		
Patents	40.3	A
Trademarks	54.8	A
Copyrights	18.8	A
Confidentiality agreements	66.7	A
Trade secrets	39.1	A
Other	3.7	A
Food Manufacturing		
Firms that protected intellectual property	**78.4**	**A**
Of these, % that used:		
Patents	21.7	A
Trademarks	73.3	A
Copyrights	17.7	A
Confidentiality agreements	69.6	A
Trade secrets	45.6	A
Other	2.7	A
Beverage and Tobacco Product Manufacturing		
Firms that protected intellectual property	**87.8**	**A**
Of these, % that used:		
Patents	36.3	A
Trademarks	86.3	A
Copyrights	35.2	A
Confidentiality agreements	77.3	A
Trade secrets	55.8	A
Other	3.4	A
Textile Mills		
Firms that protected intellectual property	**66.3**	**A**
Of these, % that used:		
Patents	26.9	A
Trademarks	52.6	B
Copyrights	22.6	A
Confidentiality agreements	62.7	B
Trade secrets	49.9	B
Other	4.6	A
Textile Product Mills		
Firms that protected intellectual property	**70.5**	**B**
Of these, % that used:		
Patents	43.0	B
Trademarks	78.0	B
Copyrights	20.5	B
Confidentiality agreements	42.1	B
Trade secrets	31.0	B
Other	0.0	A
Clothing Manufacturing		
Firms that protected intellectual property	**71.7**	**A**
Of these, % that used:		
Patents	12.1	A
Trademarks	83.2	A
Copyrights	10.4	A
Confidentiality agreements	35.6	A
Trade secrets	27.2	A
Other	1.3	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 25.2
Methods Used to Protect Intellectual Property During the Period 1997-1999
Industry by Method
Canada, Innovators in Manufacturing

	Percent	Reliability
Leather and Allied Product Manufacturing		
Firms that protected intellectual property	**81.4**	**B**
Of these, % that used:		
Patents	24.0	B
Trademarks	64.6	B
Copyrights	10.3	B
Confidentiality agreements	21.8	B
Trade secrets	39.5	B
Other	0.0	A
Sawmills and Wood Preservation		
Firms that protected intellectual property	**46.6**	**A**
Of these, % that used:		
Patents	14.9	A
Trademarks	41.4	B
Copyrights	5.6	A
Confidentiality agreements	54.2	B
Trade secrets	28.6	A
Other	10.8	A
Veneer, Plywood and Engineered Wood Product Manufacturing		
Firms that protected intellectual property	**56.2**	**B**
Of these, % that used:		
Patents	33.3	B
Trademarks	43.3	B
Copyrights	8.0	A
Confidentiality agreements	59.8	B
Trade secrets	34.1	B
Other	2.6	A
Other Wood Product Manufacturing		
Firms that protected intellectual property	**35.9**	**B**
Of these, % that used:		
Patents	20.4	B
Trademarks	46.8	B
Copyrights	5.1	A
Confidentiality agreements	51.1	B
Trade secrets	35.2	B
Other	4.9	A
Paper Manufacturing		
Firms that protected intellectual property	**67.4**	**A**
Of these, % that used:		
Patents	35.1	A
Trademarks	42.9	A
Copyrights	12.4	A
Confidentiality agreements	76.1	A
Trade secrets	34.1	A
Other	2.1	A
Printing and Related Support Activities		
Firms that protected intellectual property	**60.8**	**B**
Of these, % that used:		
Patents	21.5	B
Trademarks	39.2	B
Copyrights	28.6	B
Confidentiality agreements	70.0	B
Trade secrets	33.4	B
Other	4.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 25.2
Methods Used to Protect Intellectual Property During the Period 1997-1999
Industry by Method
Canada, Innovators in Manufacturing

	Percent	Reliability
Petroleum and Coal Products Manufacturing		
Firms that protected intellectual property	**92.7**	**A**
Of these, % that used:		
Patents	31.6	A
Trademarks	57.9	A
Copyrights	13.2	A
Confidentiality agreements	71.1	A
Trade secrets	57.9	A
Other	5.3	A
Chemical Manufacturing (excluding 3254)		
Firms that protected intellectual property	**87.1**	**A**
Of these, % that used:		
Patents	47.9	A
Trademarks	67.4	A
Copyrights	18.9	A
Confidentiality agreements	80.9	A
Trade secrets	55.0	A
Other	2.4	A
Pharmaceutical and Medicine Manufacturing (3254)		
Firms that protected intellectual property	**94.2**	**A**
Of these, % that used:		
Patents	59.4	B
Trademarks	74.9	A
Copyrights	29.5	A
Confidentiality agreements	96.0	A
Trade secrets	55.7	B
Other	0.0	A
Plastics and Rubber Products Manufacturing		
Firms that protected intellectual property	**82.1**	**A**
Of these, % that used:		
Patents	51.4	A
Trademarks	51.8	A
Copyrights	13.9	A
Confidentiality agreements	67.7	A
Trade secrets	41.5	A
Other	3.9	A
Non-Metallic Mineral Products Manufacturing		
Firms that protected intellectual property	**68.7**	**A**
Of these, % that used:		
Patents	48.5	B
Trademarks	51.3	B
Copyrights	17.3	A
Confidentiality agreements	58.0	B
Trade secrets	45.3	B
Other	8.9	A
Primary Metal Manufacturing		
Firms that protected intellectual property	**66.3**	**A**
Of these, % that used:		
Patents	33.7	A
Trademarks	23.8	A
Copyrights	13.6	A
Confidentiality agreements	74.6	A
Trade secrets	54.1	A
Other	0.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 25.2

Methods Used to Protect Intellectual Property During the Period 1997-1999
Industry by Method
Canada, Innovators in Manufacturing

	Percent	Reliability
Fabricated Metal Product Manufacturing		
Firms that protected intellectual property	70.9	A
Of these, % that used:		
Patents	37.4	B
Trademarks	41.3	B
Copyrights	13.6	A
Confidentiality agreements	68.0	B
Trade secrets	32.9	B
Other	4.4	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)		
Firms that protected intellectual property	84.6	A
Of these, % that used:		
Patents	72.3	A
Trademarks	55.2	A
Copyrights	20.5	A
Confidentiality agreements	71.6	A
Trade secrets	29.3	A
Other	0.0	A
Machinery Manufacturing (excluding 3331 & 3332)		
Firms that protected intellectual property	79.3	A
Of these, % that used:		
Patents	54.6	B
Trademarks	47.7	B
Copyrights	18.8	A
Confidentiality agreements	68.4	B
Trade secrets	35.0	B
Other	4.0	A
Computer and Peripheral Equipment Manufacturing		
Firms that protected intellectual property	91.9	A
Of these, % that used:		
Patents	44.5	B
Trademarks	66.9	B
Copyrights	47.7	B
Confidentiality agreements	94.9	A
Trade secrets	43.9	B
Other	7.6	A
Communications Equipment Manufacturing		
Firms that protected intellectual property	94.6	A
Of these, % that used:		
Patents	53.6	B
Trademarks	48.4	B
Copyrights	29.5	A
Confidentiality agreements	91.0	A
Trade secrets	42.3	B
Other	1.8	A
Audio and Video Equipment Manufacturing		
Firms that protected intellectual property	x	A
Of these, % that used:		
Patents	x	A
Trademarks	x	A
Copyrights	x	A
Confidentiality agreements	x	A
Trade secrets	x	A
Other	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 25.2
Methods Used to Protect Intellectual Property During the Period 1997-1999
Industry by Method
Canada, Innovators in Manufacturing

	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing		
Firms that protected intellectual property	84.8	A
Of these, % that used:		
Patents	50.7	B
Trademarks	49.0	B
Copyrights	32.5	B
Confidentiality agreements	92.2	A
Trade secrets	66.4	B
Other	5.2	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media		
Firms that protected intellectual property	88.5	A
Of these, % that used:		
Patents	55.9	B
Trademarks	54.0	B
Copyrights	33.3	B
Confidentiality agreements	81.5	A
Trade secrets	39.1	B
Other	3.3	A
Electrical Equipment, Appliance and Component Manufacturing		
Firms that protected intellectual property	76.2	A
Of these, % that used:		
Patents	66.1	A
Trademarks	56.0	B
Copyrights	21.7	A
Confidentiality agreements	70.2	A
Trade secrets	33.9	B
Other	6.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing		
Firms that protected intellectual property	77.8	A
Of these, % that used:		
Patents	51.5	B
Trademarks	39.9	B
Copyrights	21.1	B
Confidentiality agreements	74.5	A
Trade secrets	41.0	B
Other	1.2	A
Aerospace Product and Parts Manufacturing		
Firms that protected intellectual property	85.6	B
Of these, % that used:		
Patents	39.8	B
Trademarks	28.4	B
Copyrights	28.6	B
Confidentiality agreements	81.9	B
Trade secrets	47.7	B
Other	13.8	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 25.2
Methods Used to Protect Intellectual Property During the Period 1997-1999
Industry by Method
Canada, Innovators in Manufacturing

	Percent	Reliability
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment		
Firms that protected intellectual property	71.3	B
Of these, % that used:		
Patents	39.3	B
Trademarks	37.0	B
Copyrights	23.6	B
Confidentiality agreements	58.4	B
Trade secrets	32.1	B
Other	4.9	B
Furniture and Related Products Manufacturing		
Firms that protected intellectual property	61.6	A
Of these, % that used:		
Patents	43.0	B
Trademarks	63.4	B
Copyrights	16.3	A
Confidentiality agreements	53.1	B
Trade secrets	26.4	B
Other	3.6	A
Miscellaneous Manufacturing		
Firms that protected intellectual property	75.0	A
Of these, % that used:		
Patents	48.9	B
Trademarks	63.4	B
Copyrights	30.7	B
Confidentiality agreements	60.5	B
Trade secrets	42.9	B
Other	3.9	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 26

There are four tables for Question 26. Two levels of data presentation orders were adopted for each pair of tables for all manufacturing and innovators in manufacturing respectively. Table 26.1 and Table 26.2, present the percent of firms that applied for at least one patent and of these, where they applied for the patents for all manufacturing and innovators in manufacturing respectively. Table 26.3 and Table 26.4 present the number of patents that were applied for in Canada and the United States for all manufacturing and innovators in manufacturing respectively.

The following contains an explanation of how to read Table 26.1 and Table 26.2 using Table 26.1, 'Total Manufacturing Industries' as an example.

In Table 26.1, for 'Total Manufacturing Industries', 19.0% of firms indicated that they applied for at least one patent during the period, 1997 – 1999. Of these:

- 85.1% applied for patents in Canada;
- 75.6% applied for patents in the United States;
- 65.8% applied for patents in Both Canada and the United States;
- 19.3% applied for patents in Canada only;
- 9.8% applied for patents in the United States only; and
- 5.1% applied for patents in neither Canada nor the United States.

The following contains an explanation of how to read Table 26.3 and Table 26.4 using Table 26.3, 'Total Manufacturing Industries' as an example:

In Table 26.3, for 'Total Manufacturing Industries', 19.0% of firms indicated that they applied for at least one patent during the period, 1997 – 1999. Of these:

- 85.1% applied for patents in Canada, of which:
    - 41.6% applied for 1 patent;
    - 17.7% applied for 2 patents;
    - 11.3% applied for 3 patents;
    - …and so on…
- 75.6% applied for patents in the United States, of which:
    - 34.4% applied for 1 patent;
    - 15.7% applied for 2 patents;
    - 13.4% applied for 3 patents;
    - …and so on…

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www.statcan.ca

Table 26.1

Application for Patents in Canada and the United States During the Period 1997-1999

Canada, All Manufacturing

	Applied For At Least One Patent		Of These, % That Applied For Patents In:					
			Canada		United States		Both Canada and the United States	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	19.0	A	85.1	A	75.6	A	65.8	A
Food Manufacturing	8.6	A	81.3	B	64.4	B	51.5	B
Beverage and Tobacco Product Manufacturing	18.3	A	100.0	A	41.9	B	41.9	B
Textile Mills	13.2	A	90.8	B	86.1	B	76.9	B
Textile Product Mills	21.7	B	92.8	B	73.6	B	66.4	B
Clothing Manufacturing	3.1	A	100.0	A	65.7	C	65.7	C
Leather and Allied Product Manufacturing	15.4	A	91.5	B	83.1	B	74.6	C
Sawmills and Wood Preservation	3.8	A	90.6	A	59.2	C	49.8	C
Veneer, Plywood and Engineered Wood Product Manufacturing	7.2	A	x	A	x	C	x	C
Other Wood Product Manufacturing	6.3	A	80.4	C	81.4	B	68.9	C
Paper Manufacturing	17.2	A	75.7	B	73.8	B	55.8	B
Printing and Related Support Activities	9.1	A	83.4	B	74.6	C	65.2	C
Petroleum and Coal Products Manufacturing	22.2	A	75.0	A	50.0	A	50.0	A
Chemical Manufacturing (excluding 3254)	27.6	A	76.6	B	70.4	B	59.8	B
Pharmaceutical and Medicine Manufacturing (3254)	27.8	A	94.2	A	69.4	B	63.6	B
Plastics and Rubber Products Manufacturing	28.2	A	83.6	A	80.7	B	71.7	B
Non-Metallic Mineral Products Manufacturing	17.7	A	83.1	B	79.7	B	70.6	B
Primary Metal Manufacturing	15.2	A	96.9	A	78.4	A	75.3	A
Fabricated Metal Product Manufacturing	16.6	A	81.4	B	72.3	B	58.1	B
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	48.1	A	94.1	A	81.5	A	75.6	A
Machinery Manufacturing (excluding 3331 & 3332)	31.0	A	83.7	B	85.4	B	74.5	B
Computer and Peripheral Equipment Manufacturing	34.6	B	67.9	B	65.2	B	46.0	B
Communications Equipment Manufacturing	45.6	B	96.7	A	82.3	B	79.0	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	38.8	B	89.5	B	88.8	A	78.3	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	35.9	B	75.6	B	88.6	A	68.8	B
Electrical Equipment, Appliance and Component Manufacturing	38.1	A	88.7	B	74.4	B	66.8	B
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	27.1	A	84.4	B	77.9	B	70.2	B
Aerospace Product and Parts Manufacturing	16.9	A	73.6	B	82.0	B	64.0	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	15.6	B	...	D	80.4	C	...	D
Furniture and Related Products Manufacturing	17.8	A	85.6	B	55.0	B	46.8	B
Miscellaneous Manufacturing	24.9	A	93.2	B	77.9	B	72.2	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.1

Application for Patents in Canada and the United States During the Period 1997-1999

Canada, All Manufacturing

	Applied For At Least One Patent		Of These, % That Applied For Patents In:					
			Canada Only		United States Only		Neither Canada nor the United States	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	19.0	A	19.3	A	9.8	A	5.1	A
Food Manufacturing	8.6	A	29.7	B	12.9	B	5.8	A
Beverage and Tobacco Product Manufacturing	18.3	A	58.1	B	0.0	A	0.0	A
Textile Mills	13.2	A	13.9	B	9.2	B	0.0	A
Textile Product Mills	21.7	B	26.4	B	7.2	B	0.0	A
Clothing Manufacturing	3.1	A	34.3	C	0.0	A	0.0	A
Leather and Allied Product Manufacturing	15.4	A	16.9	B	8.5	B	0.0	A
Sawmills and Wood Preservation	3.8	A	40.8	C	9.4	A	0.0	A
Veneer, Plywood and Engineered Wood Product Manufacturing	7.2	A	x	C	x	A	x	A
Other Wood Product Manufacturing	6.3	A	11.5	B	12.5	C	7.1	B
Paper Manufacturing	17.2	A	19.9	B	18.0	B	6.3	A
Printing and Related Support Activities	9.1	A	18.3	B	9.4	B	7.2	B
Petroleum and Coal Products Manufacturing	22.2	A	25.0	A	0.0	A	25.0	A
Chemical Manufacturing (excluding 3254)	27.6	A	16.8	B	10.6	A	12.7	A
Pharmaceutical and Medicine Manufacturing (3254)	27.8	A	30.6	B	5.8	A	0.0	A
Plastics and Rubber Products Manufacturing	28.2	A	11.9	A	9.0	A	7.4	A
Non-Metallic Mineral Products Manufacturing	17.7	A	12.5	B	9.2	B	7.8	B
Primary Metal Manufacturing	15.2	A	21.6	A	3.1	A	0.0	A
Fabricated Metal Product Manufacturing	16.6	A	23.3	B	14.2	B	4.4	B
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	48.1	A	18.5	A	5.9	A	0.0	A
Machinery Manufacturing (excluding 3331 & 3332)	31.0	A	9.3	A	11.0	B	5.3	A
Computer and Peripheral Equipment Manufacturing	34.6	B	21.9	B	19.3	A	12.8	A
Communications Equipment Manufacturing	45.6	B	17.7	B	3.3	A	0.0	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	38.8	B	11.2	A	10.5	B	0.0	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	35.9	B	6.8	A	19.8	B	4.6	A
Electrical Equipment, Appliance and Component Manufacturing	38.1	A	21.8	B	7.6	A	3.7	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	27.1	A	14.3	B	7.7	B	7.8	B
Aerospace Product and Parts Manufacturing	16.9	A	9.6	B	18.0	B	8.4	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	15.6	B	19.6	C	...	D	0.0	A
Furniture and Related Products Manufacturing	17.8	A	38.8	B	8.2	B	6.2	B
Miscellaneous Manufacturing	24.9	A	21.1	B	5.7	B	1.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.2

Application for Patents in Canada and the United States During the Period 1997-1999

Canada, Innovators in Manufacturing

	Applied For At Least One Patent		Of These, % That Applied For Patents In:					
			Canada		United States		Both Canada and the United States	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	22.4	A	85.2	A	75.4	A	65.8	A
Food Manufacturing	10.5	A	80.9	B	63.6	B	50.5	B
Beverage and Tobacco Product Manufacturing	23.8	A	100.0	A	41.9	B	41.9	B
Textile Mills	15.4	A	90.8	B	86.1	B	76.9	B
Textile Product Mills	26.0	B	92.8	B	73.6	B	66.4	B
Clothing Manufacturing	3.9	A	100.0	A	67.9	C	67.9	C
Leather and Allied Product Manufacturing	16.2	B	88.9	B	77.8	C	66.7	C
Sawmills and Wood Preservation	4.6	A	89.6	A	55.0	C	44.5	C
Veneer, Plywood and Engineered Wood Product Manufacturing	8.2	A	x	A	x	C	x	C
Other Wood Product Manufacturing	7.6	A	86.2	B	80.0	C	73.9	C
Paper Manufacturing	20.2	A	73.5	B	74.9	B	55.2	B
Printing and Related Support Activities	10.5	A	83.1	B	74.1	C	64.5	C
Petroleum and Coal Products Manufacturing	26.8	A	72.7	A	45.5	A	45.5	A
Chemical Manufacturing (excluding 3254)	29.4	A	77.3	B	71.1	B	62.0	B
Pharmaceutical and Medicine Manufacturing (3254)	30.0	A	93.8	A	67.2	B	61.0	B
Plastics and Rubber Products Manufacturing	30.6	A	86.4	A	81.1	B	73.5	B
Non-Metallic Mineral Products Manufacturing	20.8	A	80.0	B	78.7	B	67.9	B
Primary Metal Manufacturing	17.3	A	100.0	A	74.9	B	74.9	B
Fabricated Metal Product Manufacturing	20.8	A	80.0	B	72.6	B	57.3	B
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	54.1	A	94.1	A	81.3	A	75.4	A
Machinery Manufacturing (excluding 3331 & 3332)	33.8	B	82.8	B	84.6	B	73.0	B
Computer and Peripheral Equipment Manufacturing	36.2	B	67.9	B	65.2	B	46.0	B
Communications Equipment Manufacturing	48.2	B	96.6	A	81.7	B	78.3	B
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	40.9	B	89.5	B	88.8	A	78.3	B
Magnetic and Optical Media	39.3	B	75.6	B	88.6	A	68.8	B
Electrical Equipment, Appliance and Component Manufacturing	40.6	A	91.4	A	73.3	B	68.6	B
Manufacturing	34.5	B	84.4	B	77.9	B	70.2	B
Aerospace Product and Parts Manufacturing	20.1	B	73.6	B	82.0	B	64.0	B
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	20.8	B	...	D	80.4	C	...	D
Furniture and Related Products Manufacturing	20.7	A	84.9	B	52.7	B	44.1	B
Miscellaneous Manufacturing	28.4	B	95.7	B	80.2	B	75.9	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.2

Application for Patents in Canada and the United States During the Period 1997-1999

Canada, Innovators in Manufacturing

	Applied For At Least One Patent		Of These, % That Applied For Patents In:					
			Canada Only		United States Only		Neither Canada nor the United States	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	22.4	A	19.5	A	9.6	A	5.1	A
Food Manufacturing	10.5	A	30.4	B	13.2	B	6.0	A
Beverage and Tobacco Product Manufacturing	23.8	A	58.1	B	0.0	A	0.0	A
Textile Mills	15.4	A	13.9	B	9.2	B	0.0	A
Textile Product Mills	26.0	B	26.4	B	7.2	B	0.0	A
Clothing Manufacturing	3.9	A	32.1	C	0.0	A	0.0	A
Leather and Allied Product Manufacturing	16.2	B	22.2	C	11.1	B	0.0	A
Sawmills and Wood Preservation	4.6	A	45.0	C	10.4	A	0.0	A
Veneer, Plywood and Engineered Wood Product Manufacturing	8.2	A	x	C	x	A	x	A
Other Wood Product Manufacturing	7.6	A	12.3	B	6.1	B	7.7	B
Paper Manufacturing	20.2	A	18.2	B	19.6	B	6.9	A
Printing and Related Support Activities	10.5	A	18.6	C	9.6	B	7.3	B
Petroleum and Coal Products Manufacturing	26.8	A	27.3	A	0.0	A	27.3	A
Chemical Manufacturing (excluding 3254)	29.4	A	15.3	B	9.0	A	13.6	B
Pharmaceutical and Medicine Manufacturing (3254)	30.0	A	32.8	B	6.2	A	0.0	A
Plastics and Rubber Products Manufacturing	30.6	A	12.8	B	7.5	A	6.1	A
Non-Metallic Mineral Products Manufacturing	20.8	A	12.1	B	10.8	B	9.2	B
Primary Metal Manufacturing	17.3	A	25.1	B	0.0	A	0.0	A
Fabricated Metal Product Manufacturing	20.8	A	22.7	B	15.3	B	4.7	B
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	54.1	A	18.7	A	5.9	A	0.0	A
Machinery Manufacturing (excluding 3331 & 3332)	33.8	B	9.8	A	11.6	B	5.6	A
Computer and Peripheral Equipment Manufacturing	36.2	B	21.9	B	19.3	A	12.8	A
Communications Equipment Manufacturing	48.2	B	18.3	B	3.4	A	0.0	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	40.9	B	11.2	A	10.5	B	0.0	A
Magnetic and Optical Media	39.3	B	6.8	A	19.8	B	4.6	A
Electrical Equipment, Appliance and Component Manufacturing	40.6	A	22.8	B	4.7	A	3.9	A
Manufacturing	34.5	B	14.3	B	7.7	B	7.8	B
Aerospace Product and Parts Manufacturing	20.1	B	9.6	B	18.0	B	8.4	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	20.8	B	19.6	C	...	D	0.0	A
Furniture and Related Products Manufacturing	20.7	A	40.8	B	8.6	B	6.5	B
Miscellaneous Manufacturing	28.4	B	19.8	B	4.3	B	0.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.3

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, All Manufacturing

			Of These, Number of Patents Applied For:							
			1		2		3		4	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries										
Applied for at least one patent	19.0	A								
Of these, % that applied for patents in:										
Canada	85.1	A	41.6	A	17.7	A	11.3	A	4.2	A
United States	75.6	A	34.4	A	15.7	A	13.4	A	3.7	A
Food Manufacturing										
Applied for at least one patent	8.6	A								
Of these, % that applied for patents in:										
Canada	81.3	B	42.8	B	12.6	B	12.5	B	3.8	B
United States	64.4	B	30.7	B	8.6	B	21.2	B	0.0	A
Beverage and Tobacco Product Manufacturing										
Applied for at least one patent	18.3	A								
Of these, % that applied for patents in:										
Canada	100.0	A	51.1	B	6.3	A	6.1	A	0.0	A
United States	41.9	B	x	B	x	A	x	A	x	A
Textile Mills										
Applied for at least one patent	13.2	A								
Of these, % that applied for patents in:										
Canada	90.8	B	22.0	B	30.5	B	10.2	B	0.0	A
United States	86.1	B	34.0	B	21.4	B	10.7	B	0.0	A
Textile Product Mills										
Applied for at least one patent	21.7	B								
Of these, % that applied for patents in:										
Canada	92.8	B	54.2	B	16.2	B	11.8	B	6.8	B
United States	73.6	B	37.4	C	20.5	B	14.9	B	8.5	B
Clothing Manufacturing										
Applied for at least one patent	3.1	A								
Of these, % that applied for patents in:										
Canada	100.0	A	60.4	C	6.7	B	6.7	B	6.7	B
United States	65.7	C	...	D	10.3	C	20.1	C	0.0	A
Leather and Allied Product Manufacturing										
Applied for at least one patent	15.4	A								
Of these, % that applied for patents in:										
Canada	91.5	B	63.1	C	27.7	C	9.2	A	0.0	A
United States	83.1	B	59.3	C	30.5	C	0.0	A	0.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.3
Application for Patents in Canada and the United States During the Period 1997-1999
Number of Applications
Canada, All Manufacturing

			Of These, Number of Patents Applied For:					
			5 to 9		10 or more		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries								
Applied for at least one patent	19.0	A						
Of these, % that applied for patents in:								
Canada	85.1	A	9.4	A	9.6	A	6.2	A
United States	75.6	A	11.8	A	13.4	A	7.6	A
Food Manufacturing								
Applied for at least one patent	8.6	A						
Of these, % that applied for patents in:								
Canada	81.3	B	6.4	B	9.4	B	12.5	B
United States	64.4	B	14.1	B	9.6	B	15.8	B
Beverage and Tobacco Product Manufacturing								
Applied for at least one patent	18.3	A						
Of these, % that applied for patents in:								
Canada	100.0	A	0.0	A	30.7	B	5.8	A
United States	41.9	B	x	B	x	B	x	B
Textile Mills								
Applied for at least one patent	13.2	A						
Of these, % that applied for patents in:								
Canada	90.8	B	10.1	B	22.0	B	5.1	B
United States	86.1	B	10.7	B	17.8	B	5.3	B
Textile Product Mills								
Applied for at least one patent	21.7	B						
Of these, % that applied for patents in:								
Canada	92.8	B	6.8	B	4.1	A	0.0	A
United States	73.6	B	13.8	B	0.0	A	4.9	B
Clothing Manufacturing								
Applied for at least one patent	3.1	A						
Of these, % that applied for patents in:								
Canada	100.0	A	6.5	B	13.0	C	0.0	A
United States	65.7	C	9.8	C	9.4	C	0.0	A
Leather and Allied Product Manufacturing								
Applied for at least one patent	15.4	A						
Of these, % that applied for patents in:								
Canada	91.5	B	0.0	A	0.0	A	0.0	A
United States	83.1	B	10.2	B	0.0	A	0.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.3

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, All Manufacturing

			Of These, Number of Patents Applied For:							
			1		2		3		4	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Sawmills and Wood Preservation										
Applied for at least one patent	3.8	A								
Of these, % that applied for patents in:										
Canada	90.6	A	83.2	C	16.8	C	0.0	A	0.0	A
United States	59.2	C	x	A	x	A	x	A	x	A
Veneer, Plywood and Engineered Wood Product Manufacturing										
Applied for at least one patent	7.2	A								
Of these, % that applied for patents in:										
Canada	x	A	x	C	x	C	x	A	x	A
United States	x	C	x	C	x	A	x	A	x	A
Other Wood Product Manufacturing										
Applied for at least one patent	6.3	A								
Of these, % that applied for patents in:										
Canada	80.4	C	85.7	C	0.0	A	7.1	B	0.0	A
United States	81.4	B	77.6	C	15.3	C	0.0	A	0.0	A
Paper Manufacturing										
Applied for at least one patent	17.2	A								
Of these, % that applied for patents in:										
Canada	75.7	B	39.9	B	8.4	B	11.1	B	0.0	A
United States	73.8	B	36.8	B	4.3	A	7.1	B	4.3	A
Printing and Related Support Activities										
Applied for at least one patent	9.1	A								
Of these, % that applied for patents in:										
Canada	83.4	B	40.7	C	21.9	C	8.2	B	0.0	A
United States	74.6	C	35.6	C	9.9	B	3.8	B	5.3	B
Petroleum and Coal Products Manufacturing										
Applied for at least one patent	22.2	A								
Of these, % that applied for patents in:										
Canada	75.0	A	0.0	A	0.0	A	22.2	A	11.1	A
United States	50.0	A	x	A	x	A	x	A	x	A
Chemical Manufacturing (excluding 3254)										
Applied for at least one patent	27.6	A								
Of these, % that applied for patents in:										
Canada	76.6	B	23.2	B	20.2	B	12.3	B	0.0	A
United States	70.4	B	14.8	B	13.1	B	18.8	B	2.3	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.3

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, All Manufacturing

			Of These, Number of Patents Applied For:					
			5 to 9		10 or more		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Sawmills and Wood Preservation								
Applied for at least one patent	**3.8**	**A**						
Of these, % that applied for patents in:								
Canada	90.6	A	0.0	A	0.0	A	0.0	A
United States	59.2	C	x	A	x	A	x	A
Veneer, Plywood and Engineered Wood Product Manufacturing								
Applied for at least one patent	**7.2**	**A**						
Of these, % that applied for patents in:								
Canada	x	A	x	A	x	A	x	B
United States	x	C	x	A	x	A	x	C
Other Wood Product Manufacturing								
Applied for at least one patent	**6.3**	**A**						
Of these, % that applied for patents in:								
Canada	80.4	C	7.1	B	0.0	A	0.0	A
United States	81.4	B	7.0	B	0.0	A	0.0	A
Paper Manufacturing								
Applied for at least one patent	**17.2**	**A**						
Of these, % that applied for patents in:								
Canada	75.7	B	22.2	B	8.2	A	10.2	B
United States	73.8	B	18.5	B	18.6	B	10.5	B
Printing and Related Support Activities								
Applied for at least one patent	**9.1**	**A**						
Of these, % that applied for patents in:								
Canada	83.4	B	4.7	B	0.0	A	24.6	C
United States	74.6	C	5.3	B	12.6	B	27.5	C
Petroleum and Coal Products Manufacturing								
Applied for at least one patent	**22.2**	**A**						
Of these, % that applied for patents in:								
Canada	75.0	A	22.2	A	44.4	A	0.0	A
United States	50.0	A	x	A	x	A	x	A
Chemical Manufacturing (excluding 3254)								
Applied for at least one patent	**27.6**	**A**						
Of these, % that applied for patents in:								
Canada	76.6	B	15.5	B	15.4	A	13.4	B
United States	70.4	B	12.0	B	19.3	B	19.7	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.3
Application for Patents in Canada and the United States During the Period 1997-1999
Number of Applications
Canada, All Manufacturing

			Of These, Number of Patents Applied For:							
			1		2		3		4	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Pharmaceutical and Medicine Manufacturing (3254)										
Applied for at least one patent	27.8	A								
Of these, % that applied for patents in:										
Canada	94.2	A	35.8	B	13.2	B	7.0	B	6.2	A
United States	69.4	B	23.5	B	8.4	A	8.4	A	0.0	A
Plastics and Rubber Products Manufacturing										
Applied for at least one patent	28.2	A								
Of these, % that applied for patents in:										
Canada	83.6	A	48.8	B	15.3	B	10.5	B	6.8	A
United States	80.7	B	43.1	B	19.3	B	13.7	B	3.4	A
Non-Metallic Mineral Products Manufacturing										
Applied for at least one patent	17.7	A								
Of these, % that applied for patents in:										
Canada	83.1	B	42.1	B	30.7	B	7.0	B	3.5	A
United States	79.7	B	21.1	B	48.4	B	7.3	B	3.7	A
Primary Metal Manufacturing										
Applied for at least one patent	15.2	A								
Of these, % that applied for patents in:										
Canada	96.9	A	36.1	B	11.2	B	18.9	B	6.6	A
United States	78.4	A	31.0	B	9.7	B	9.7	B	18.0	B
Fabricated Metal Product Manufacturing										
Applied for at least one patent	16.6	A								
Of these, % that applied for patents in:										
Canada	81.4	B	39.8	B	25.1	B	15.6	B	5.3	B
United States	72.3	B	36.4	B	12.8	B	24.0	B	1.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)										
Applied for at least one patent	48.1	A								
Of these, % that applied for patents in:										
Canada	94.1	A	43.3	B	9.7	A	10.4	A	2.2	A
United States	81.5	A	35.8	B	16.1	A	10.8	A	3.7	A
Machinery Manufacturing (excluding 3331 & 3332)										
Applied for at least one patent	31.0	A								
Of these, % that applied for patents in:										
Canada	83.7	B	41.1	B	23.4	B	12.5	B	7.7	B
United States	85.4	B	38.2	B	20.2	B	10.0	B	6.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.3

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, All Manufacturing

			Of These, Number of Patents Applied For:					
			5 to 9		10 or more		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Pharmaceutical and Medicine Manufacturing (3254)								
Applied for at least one patent	27.8	A						
Of these, % that applied for patents in:								
Canada	94.2	A	7.0	B	30.9	A	0.0	A
United States	69.4	B	9.5	B	50.2	B	0.0	A
Plastics and Rubber Products Manufacturing								
Applied for at least one patent	28.2	A						
Of these, % that applied for patents in:								
Canada	83.6	A	10.5	B	4.9	A	3.2	A
United States	80.7	B	12.1	B	4.2	A	4.2	A
Non-Metallic Mineral Products Manufacturing								
Applied for at least one patent	17.7	A						
Of these, % that applied for patents in:								
Canada	83.1	B	1.9	A	6.1	A	8.6	B
United States	79.7	B	0.0	A	10.6	B	9.0	B
Primary Metal Manufacturing								
Applied for at least one patent	15.2	A						
Of these, % that applied for patents in:								
Canada	96.9	A	12.9	A	6.3	A	7.9	B
United States	78.4	A	17.7	B	4.0	A	9.8	B
Fabricated Metal Product Manufacturing								
Applied for at least one patent	16.6	A						
Of these, % that applied for patents in:								
Canada	81.4	B	7.2	B	6.0	B	1.0	A
United States	72.3	B	11.5	B	13.0	B	1.1	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)								
Applied for at least one patent	48.1	A						
Of these, % that applied for patents in:								
Canada	94.1	A	14.5	A	14.8	A	5.1	A
United States	81.5	A	14.4	A	14.4	A	4.7	A
Machinery Manufacturing (excluding 3331 & 3332)								
Applied for at least one patent	31.0	A						
Of these, % that applied for patents in:								
Canada	83.7	B	8.2	B	4.1	A	3.0	A
United States	85.4	B	13.0	B	9.6	B	3.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.3

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, All Manufacturing

			Of These, Number of Patents Applied For:							
			1		2		3		4	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Computer and Peripheral Equipment Manufacturing										
Applied for at least one patent	**34.6**	**B**								
Of these, % that applied for patents in:										
Canada	67.9	B	9.4	A	32.3	C	18.9	B	0.0	A
United States	65.2	B	9.8	A	0.0	A	9.8	A	0.0	A
Communications Equipment Manufacturing										
Applied for at least one patent	**45.6**	**B**								
Of these, % that applied for patents in:										
Canada	96.7	A	43.9	B	0.0	A	0.0	A	15.7	B
United States	82.3	B	21.3	B	8.1	A	22.9	B	0.0	A
Audio and Video Equipment Manufacturing										
Applied for at least one patent	**x**	**A**								
Of these, % that applied for patents in:										
Canada	x	A	x	A	x	A	x	A	x	A
United States	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing										
Applied for at least one patent	**38.8**	**B**								
Of these, % that applied for patents in:										
Canada	89.5	B	20.6	B	12.5	A	5.9	B	5.9	B
United States	88.8	A	20.7	B	18.1	B	5.9	B	5.9	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and										
Applied for at least one patent	**35.9**	**B**								
Of these, % that applied for patents in:										
Canada	75.6	B	22.5	B	22.6	B	9.5	A	11.3	A
United States	88.6	A	27.7	B	18.8	B	5.5	A	9.9	A
Electrical Equipment, Appliance and Component Manufacturing										
Applied for at least one patent	**38.1**	**A**								
Of these, % that applied for patents in:										
Canada	88.7	B	31.0	B	8.8	B	9.8	A	2.9	A
United States	74.4	B	24.1	B	9.1	A	4.1	A	0.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing										
Applied for at least one patent	**27.1**	**A**								
Of these, % that applied for patents in:										
Canada	84.4	B	40.8	B	13.0	B	17.3	B	2.5	A
United States	77.9	B	41.4	B	5.5	B	14.5	B	7.2	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.3

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, All Manufacturing

			Of These, Number of Patents Applied For:					
			5 to 9		10 or more		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Computer and Peripheral Equipment Manufacturing								
Applied for at least one patent	34.6	B						
Of these, % that applied for patents in:								
Canada	67.9	B	18.9	B	9.4	A	11.0	C
United States	65.2	B	19.7	A	39.3	B	21.3	B
Communications Equipment Manufacturing								
Applied for at least one patent	45.6	B						
Of these, % that applied for patents in:								
Canada	96.7	A	24.3	B	16.0	B	0.0	A
United States	82.3	B	20.5	B	27.2	B	0.0	A
Audio and Video Equipment Manufacturing								
Applied for at least one patent	x	A						
Of these, % that applied for patents in:								
Canada	x	A	x	A	x	A	x	A
United States	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing								
Applied for at least one patent	38.8	B						
Of these, % that applied for patents in:								
Canada	89.5	B	12.1	B	24.6	B	18.4	B
United States	88.8	A	12.2	B	18.5	A	18.5	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and								
Applied for at least one patent	35.9	B						
Of these, % that applied for patents in:								
Canada	75.6	B	6.0	A	9.1	B	18.9	B
United States	88.6	A	11.6	B	10.3	B	16.1	B
Electrical Equipment, Appliance and Component Manufacturing								
Applied for at least one patent	38.1	A						
Of these, % that applied for patents in:								
Canada	88.7	B	16.8	B	19.0	B	11.8	B
United States	74.4	B	18.3	B	33.5	B	10.9	B
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing								
Applied for at least one patent	27.1	A						
Of these, % that applied for patents in:								
Canada	84.4	B	3.9	A	12.5	B	10.1	B
United States	77.9	B	4.3	A	13.6	B	13.6	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.3

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, All Manufacturing

			Of These, Number of Patents Applied For:							
			1		2		3		4	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Aerospace Product and Parts Manufacturing										
Applied for at least one patent	**16.9**	**A**								
Of these, % that applied for patents in:										
Canada	73.6	B	60.2	C	0.0	A	0.0	A	13.3	C
United States	82.0	B	42.3	C	0.0	A	0.0	A	12.0	C
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment										
Applied for at least one patent	**15.6**	**B**								
Of these, % that applied for patents in:										
Canada	...	D	54.4	C	12.2	C	0.0	A	11.6	C
United States	80.4	C	43.0	C	12.5	C	...	D	0.0	A
Furniture and Related Products Manufacturing										
Applied for at least one patent	**17.8**	**A**								
Of these, % that applied for patents in:										
Canada	85.6	B	62.2	B	19.4	B	5.6	B	2.1	A
United States	55.0	B	42.4	B	16.2	B	8.8	B	5.6	B
Miscellaneous Manufacturing										
Applied for at least one patent	**24.9**	**A**								
Of these, % that applied for patents in:										
Canada	93.2	B	40.0	B	24.7	B	15.8	B	0.0	A
United States	77.9	B	27.6	B	21.8	B	27.9	B	0.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.3

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, All Manufacturing

			Of These, Number of Patents Applied For:					
			5 to 9		10 or more		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Aerospace Product and Parts Manufacturing								
Applied for at least one patent	**16.9**	**A**						
Of these, % that applied for patents in:								
Canada	73.6	B	0.0	*A	13.1	C	13.3	C
United States	82.0	B	0.0	A	33.7	C	12.0	C
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment								
Applied for at least one patent	**15.6**	**B**						
Of these, % that applied for patents in:								
Canada	...	D	0.0	A	21.8	C	0.0	A
United States	80.4	C	0.0	A	...	D	0.0	A
Furniture and Related Products Manufacturing								
Applied for at least one patent	**17.8**	**A**						
Of these, % that applied for patents in:								
Canada	85.6	B	5.6	B	3.5	A	1.5	A
United States	55.0	B	12.1	B	12.6	B	2.3	A
Miscellaneous Manufacturing								
Applied for at least one patent	**24.9**	**A**						
Of these, % that applied for patents in:								
Canada	93.2	B	7.9	B	9.8	B	1.8	A
United States	77.9	B	12.1	B	7.1	B	3.5	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.4

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, Innovators in Manufacturing

			Of These, Number of Patents Applied For:							
			1		2		3		4	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries										
Applied for at least one patent	**22.4**	**A**								
Of these, % that applied for patents in:										
Canada	85.2	A	40.3	A	18.1	A	11.8	A	4.4	A
United States	75.4	A	32.9	A	16.1	A	13.7	A	3.9	A
Food Manufacturing										
Applied for at least one patent	**10.5**	**A**								
Of these, % that applied for patents in:										
Canada	80.9	B	44.0	B	13.0	B	12.8	B	3.9	B
United States	63.6	B	31.8	B	8.9	B	21.9	B	0.0	A
Beverage and Tobacco Product Manufacturing										
Applied for at least one patent	**23.8**	**A**								
Of these, % that applied for patents in:										
Canada	100.0	A	51.1	B	6.3	A	6.1	A	0.0	A
United States	41.9	B	x	B	x	A	x	A	x	A
Textile Mills										
Applied for at least one patent	**15.4**	**A**								
Of these, % that applied for patents in:										
Canada	90.8	B	22.0	B	30.5	B	10.2	B	0.0	A
United States	86.1	B	34.0	B	21.4	B	10.7	B	0.0	A
Textile Product Mills										
Applied for at least one patent	**26.0**	**B**								
Of these, % that applied for patents in:										
Canada	92.8	B	54.2	B	16.2	B	11.8	B	6.8	B
United States	73.6	B	37.4	C	20.5	B	14.9	B	8.5	B
Clothing Manufacturing										
Applied for at least one patent	**3.9**	**A**								
Of these, % that applied for patents in:										
Canada	100.0	A	54.3	C	7.8	B	7.8	B	7.8	B
United States	67.9	C	...	D	11.4	C	22.4	C	0.0	A
Leather and Allied Product Manufacturing										
Applied for at least one patent	**16.2**	**B**								
Of these, % that applied for patents in:										
Canada	88.9	B	50.0	C	37.5	C	12.5	B	0.0	A
United States	77.8	C	42.9	C	42.9	C	0.0	A	0.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.4

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, Innovators in Manufacturing

			Of These, Number of Patents Applied For:					
			5 to 9		10 or more		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries								
Applied for at least one patent	**22.4**	**A**						
Of these, % that applied for patents in:								
Canada	85.2	A	9.6	A	9.6	A	6.3	A
United States	75.4	A	12.0	A	13.7	A	7.7	A
Food Manufacturing								
Applied for at least one patent	**10.5**	**A**						
Of these, % that applied for patents in:								
Canada	80.9	B	6.6	B	9.7	B	10.1	B
United States	63.6	B	14.6	B	9.9	B	12.9	B
Beverage and Tobacco Product Manufacturing								
Applied for at least one patent	**23.8**	**A**						
Of these, % that applied for patents in:								
Canada	100.0	A	0.0	A	30.7	B	5.8	A
United States	41.9	B	x	B	x	B	x	B
Textile Mills								
Applied for at least one patent	**15.4**	**A**						
Of these, % that applied for patents in:								
Canada	90.8	B	10.1	B	22.0	B	5.1	B
United States	86.1	B	10.7	B	17.8	B	5.3	B
Textile Product Mills								
Applied for at least one patent	**26.0**	**B**						
Of these, % that applied for patents in:								
Canada	92.8	B	6.8	B	4.1	A	0.0	A
United States	73.6	B	13.8	B	0.0	A	4.9	B
Clothing Manufacturing								
Applied for at least one patent	**3.9**	**A**						
Of these, % that applied for patents in:								
Canada	100.0	A	7.4	B	14.9	C	0.0	A
United States	67.9	C	11.0	C	10.5	C	0.0	A
Leather and Allied Product Manufacturing								
Applied for at least one patent	**16.2**	**B**						
Of these, % that applied for patents in:								
Canada	88.9	B	0.0	A	0.0	A	0.0	A
United States	77.8	C	14.3	C	0.0	A	0.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.4

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, Innovators in Manufacturing

			Of These, Number of Patents Applied For:							
			1		2		3		4	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Sawmills and Wood Preservation										
Applied for at least one patent	**4.6**	**A**								
Of these, % that applied for patents in:										
Canada	89.6	A	x	C	x	C	x	A	x	A
United States	55.0	C	x	A	x	A	x	A	x	A
Veneer, Plywood and Engineered Wood Product Manufacturing										
Applied for at least one patent	**8.2**	**A**								
Of these, % that applied for patents in:										
Canada	x	A	x	C	x	C	x	A	x	A
United States	x	C	x	C	x	A	x	A	x	A
Other Wood Product Manufacturing										
Applied for at least one patent	**7.6**	**A**								
Of these, % that applied for patents in:										
Canada	86.2	B	85.7	C	0.0	A	7.1	B	0.0	A
United States	80.0	C	84.6	C	7.7	B	0.0	A	0.0	A
Paper Manufacturing										
Applied for at least one patent	**20.2**	**A**								
Of these, % that applied for patents in:										
Canada	73.5	B	40.1	B	9.4	B	12.5	B	0.0	A
United States	74.9	B	39.6	B	4.6	B	7.6	B	4.6	B
Printing and Related Support Activities										
Applied for at least one patent	**10.5**	**A**								
Of these, % that applied for patents in:										
Canada	83.1	B	41.6	C	22.4	C	8.4	B	0.0	A
United States	74.1	C	36.6	C	10.1	B	3.9	B	5.5	B
Petroleum and Coal Products Manufacturing										
Applied for at least one patent	**26.8**	**A**								
Of these, % that applied for patents in:										
Canada	72.7	A	0.0	A	0.0	A	25.0	A	0.0	A
United States	45.5	A	x	A	x	A	x	A	x	A
Chemical Manufacturing (excluding 3254)										
Applied for at least one patent	**29.4**	**A**								
Of these, % that applied for patents in:										
Canada	77.3	B	22.1	B	19.2	B	13.0	B	0.0	A
United States	71.1	B	14.3	B	13.9	B	16.7	B	2.4	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.4

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, Innovators in Manufacturing

			Of These, Number of Patents Applied For:					
			5 to 9		10 or more		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Sawmills and Wood Preservation								
Applied for at least one patent	**4.6**	**A**						
Of these, % that applied for patents in:								
Canada	89.6	A	x	A	x	A	x	A
United States	55.0	C	x	A	x	A	x	A
Veneer, Plywood and Engineered Wood Product Manufacturing								
Applied for at least one patent	**8.2**	**A**						
Of these, % that applied for patents in:								
Canada	x	A	x	A	x	A	x	C
United States	x	C	x	A	x	A	x	C
Other Wood Product Manufacturing								
Applied for at least one patent	**7.6**	**A**						
Of these, % that applied for patents in:								
Canada	86.2	B	7.1	B	0.0	A	0.0	A
United States	80.0	C	7.7	B	0.0	A	0.0	A
Paper Manufacturing								
Applied for at least one patent	**20.2**	**A**						
Of these, % that applied for patents in:								
Canada	73.5	B	20.3	B	6.1	A	11.5	B
United States	74.9	B	15.3	B	17.0	B	11.3	B
Printing and Related Support Activities								
Applied for at least one patent	**10.5**	**A**						
Of these, % that applied for patents in:								
Canada	83.1	B	2.4	B	0.0	A	25.2	C
United States	74.1	C	2.7	B	13.0	B	28.2	C
Petroleum and Coal Products Manufacturing								
Applied for at least one patent	**26.8**	**A**						
Of these, % that applied for patents in:								
Canada	72.7	A	25.0	A	50.0	A	0.0	A
United States	45.5	A	x	A	x	A	x	A
Chemical Manufacturing (excluding 3254)								
Applied for at least one patent	**29.4**	**A**						
Of these, % that applied for patents in:								
Canada	77.3	B	16.5	B	15.1	A	14.2	B
United States	71.1	B	12.8	B	19.1	B	20.9	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.4

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, Innovators in Manufacturing

			Of These, Number of Patents Applied For:							
			1		2		3		4	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Pharmaceutical and Medicine Manufacturing (3254)										
Applied for at least one patent	30.0	A								
Of these, % that applied for patents in:										
Canada	93.8	A	38.5	B	6.6	A	7.5	B	6.6	A
United States	67.2	B	26.0	B	9.3	A	9.3	A	0.0	A
Plastics and Rubber Products Manufacturing										
Applied for at least one patent	30.6	A								
Of these, % that applied for patents in:										
Canada	86.4	A	47.5	B	15.9	B	10.9	B	7.1	A
United States	81.1	B	41.7	B	20.6	B	12.9	B	3.6	A
Non-Metallic Mineral Products Manufacturing										
Applied for at least one patent	20.8	A								
Of these, % that applied for patents in:										
Canada	80.0	B	39.8	B	34.3	B	8.6	B	4.3	A
United States	78.7	B	19.3	B	49.3	B	8.7	B	4.4	A
Primary Metal Manufacturing										
Applied for at least one patent	17.3	A								
Of these, % that applied for patents in:										
Canada	100.0	A	35.4	B	12.6	B	21.3	B	7.4	A
United States	74.9	B	32.9	B	11.8	B	11.8	B	21.9	B
Fabricated Metal Product Manufacturing										
Applied for at least one patent	20.8	A								
Of these, % that applied for patents in:										
Canada	80.0	B	35.3	B	26.2	B	17.1	B	5.8	B
United States	72.6	B	31.8	B	13.8	B	25.7	B	1.2	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)										
Applied for at least one patent	54.1	A								
Of these, % that applied for patents in:										
Canada	94.1	A	43.8	B	9.8	A	10.5	A	2.3	A
United States	81.3	A	36.3	B	16.3	A	11.0	A	3.8	A
Machinery Manufacturing (excluding 3331 & 3332)										
Applied for at least one patent	33.8	B								
Of these, % that applied for patents in:										
Canada	82.8	B	37.0	B	25.0	B	13.4	B	8.2	B
United States	84.6	B	34.1	B	21.5	B	10.7	B	6.5	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.4

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, Innovators in Manufacturing

			Of These, Number of Patents Applied For:					
			5 to 9		10 or more		*Unknown*	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Pharmaceutical and Medicine Manufacturing (3254)								
Applied for at least one patent	30.0	A						
Of these, % that applied for patents in:								
Canada	93.8	A	7.5	B	33.2	A	0.0	A
United States	67.2	B	0.0	A	55.5	B	0.0	A
Plastics and Rubber Products Manufacturing								
Applied for at least one patent	30.6	A						
Of these, % that applied for patents in:								
Canada	86.4	A	11.0	B	5.1	A	2.5	A
United States	81.1	B	13.0	B	4.5	A	3.6	A
Non-Metallic Mineral Products Manufacturing								
Applied for at least one patent	20.8	A						
Of these, % that applied for patents in:								
Canada	80.0	B	2.4	A	0.0	A	10.6	B
United States	78.7	B	0.0	A	7.6	B	10.8	B
Primary Metal Manufacturing								
Applied for at least one patent	17.3	A						
Of these, % that applied for patents in:								
Canada	100.0	A	14.5	A	3.5	A	5.2	B
United States	74.9	B	14.6	B	0.0	A	7.0	B
Fabricated Metal Product Manufacturing								
Applied for at least one patent	20.8	A						
Of these, % that applied for patents in:								
Canada	80.0	B	7.8	B	6.6	B	1.1	A
United States	72.6	B	12.4	B	14.0	B	1.2	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)								
Applied for at least one patent	54.1	A						
Of these, % that applied for patents in:								
Canada	94.1	A	14.7	A	13.8	A	5.2	A
United States	81.3	A	14.6	A	13.3	A	4.7	A
Machinery Manufacturing (excluding 3331 & 3332)								
Applied for at least one patent	33.8	B						
Of these, % that applied for patents in:								
Canada	82.8	B	8.7	B	4.4	B	3.2	A
United States	84.6	B	13.9	B	10.3	B	3.2	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.4

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, Innovators in Manufacturing

			Of These, Number of Patents Applied For:							
			1		2		3		4	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Computer and Peripheral Equipment Manufacturing										
Applied for at least one patent	**36.2**	**B**								
Of these, % that applied for patents in:										
Canada	67.9	B	9.4	A	32.3	C	18.9	B	0.0	A
United States	65.2	B	9.8	A	0.0	A	9.8	A	0.0	A
Communications Equipment Manufacturing										
Applied for at least one patent	**48.2**	**B**								
Of these, % that applied for patents in:										
Canada	96.6	A	45.5	B	0.0	A	0.0	A	16.3	B
United States	81.7	B	22.2	B	8.4	A	23.8	B	0.0	A
Audio and Video Equipment Manufacturing										
Applied for at least one patent	**x**	**A**								
Of these, % that applied for patents in:										
Canada	x	A	x	A	x	A	x	A	x	A
United States	x	A	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing										
Applied for at least one patent	**40.9**	**B**								
Of these, % that applied for patents in:										
Canada	89.5	B	20.6	B	12.5	A	5.9	B	5.9	B
United States	88.8	A	20.7	B	18.1	B	5.9	B	5.9	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media										
Applied for at least one patent	**39.3**	**B**								
Of these, % that applied for patents in:										
Canada	75.6	B	22.5	B	22.6	B	9.5	A	11.3	A
United States	88.6	A	27.7	B	18.8	B	5.5	A	9.9	A
Electrical Equipment, Appliance and Component Manufacturing										
Applied for at least one patent	**40.6**	**A**								
Of these, % that applied for patents in:										
Canada	91.4	A	31.4	B	8.9	B	9.9	A	2.9	A
United States	73.3	B	19.4	B	9.6	A	4.4	A	0.0	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing										
Applied for at least one patent	**34.5**	**B**								
Of these, % that applied for patents in:										
Canada	84.4	B	40.8	B	13.0	B	17.3	B	2.5	A
United States	77.9	B	41.4	B	5.5	B	14.5	B	7.2	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.4

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, Innovators in Manufacturing

			Of These, Number of Patents Applied For:					
			5 to 9		10 or more		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Computer and Peripheral Equipment Manufacturing								
Applied for at least one patent	36.2	B						
Of these, % that applied for patents in:								
Canada	67.9	B	18.9	B	9.4	A	11.0	C
United States	65.2	B	19.7	A	39.3	B	21.3	B
Communications Equipment Manufacturing								
Applied for at least one patent	48.2	B						
Of these, % that applied for patents in:								
Canada	96.6	A	21.6	B	16.6	B	0.0	A
United States	81.7	B	17.2	B	28.4	B	0.0	A
Audio and Video Equipment Manufacturing								
Applied for at least one patent	x	A						
Of these, % that applied for patents in:								
Canada	x	A	x	A	x	A	x	A
United States	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing								
Applied for at least one patent	40.9	B						
Of these, % that applied for patents in:								
Canada	89.5	B	12.1	B	24.6	B	18.4	B
United States	88.8	A	12.2	B	18.5	A	18.5	B
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media								
Applied for at least one patent	39.3	B						
Of these, % that applied for patents in:								
Canada	75.6	B	6.0	A	9.1	B	18.9	B
United States	88.6	A	11.6	B	10.3	B	16.1	B
Electrical Equipment, Appliance and Component Manufacturing								
Applied for at least one patent	40.6	A						
Of these, % that applied for patents in:								
Canada	91.4	A	17.0	B	19.3	B	10.5	B
United States	73.3	B	19.4	B	35.6	B	11.6	B
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing								
Applied for at least one patent	34.5	B						
Of these, % that applied for patents in:								
Canada	84.4	B	3.9	A	12.5	B	10.1	B
United States	77.9	B	4.3	A	13.6	B	13.6	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.4

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, Innovators in Manufacturing

			Of These, Number of Patents Applied For:							
			1		2		3		4	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Aerospace Product and Parts Manufacturing										
Applied for at least one patent	20.1	B								
Of these, % that applied for patents in:										
Canada	73.6	B	60.2	C	0.0	A	0.0	A	13.3	C
United States	82.0	B	42.3	C	0.0	A	0.0	A	12.0	C
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment										
Applied for at least one patent	20.8	B								
Of these, % that applied for patents in:										
Canada	...	D	54.4	C	12.2	C	0.0	A	11.6	C
United States	80.4	C	43.0	C	12.5	C	...	D	0.0	A
Furniture and Related Products Manufacturing										
Applied for at least one patent	20.7	A								
Of these, % that applied for patents in:										
Canada	84.9	B	62.2	B	20.5	B	3.7	B	2.3	A
United States	52.7	B	40.5	B	17.7	B	6.0	B	6.2	B
Miscellaneous Manufacturing										
Applied for at least one patent	28.4	B								
Of these, % that applied for patents in:										
Canada	95.7	B	38.9	B	24.4	B	16.4	B	0.0	A
United States	80.2	B	27.2	B	20.2	B	28.9	B	0.0	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 26.4

Application for Patents in Canada and the United States During the Period 1997-1999

Number of Applications

Canada, Innovators in Manufacturing

			Of These, Number of Patents Applied For:					
			5 to 9		10 or more		Unknown	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Aerospace Product and Parts Manufacturing								
Applied for at least one patent	20.1	B						
Of these, % that applied for patents in:								
Canada	73.6	B	0.0	A	13.1	C	13.3	C
United States	82.0	B	0.0	A	33.7	C	12.0	C
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment								
Applied for at least one patent	20.8	B						
Of these, % that applied for patents in:								
Canada	...	D	0.0	A	21.8	C	0.0	A
United States	80.4	C	0.0	A	...	D	0.0	A
Furniture and Related Products Manufacturing								
Applied for at least one patent	20.7	A						
Of these, % that applied for patents in:								
Canada	84.9	B	6.0	B	3.7	A	1.6	A
United States	52.7	B	13.3	B	13.8	B	2.6	A
Miscellaneous Manufacturing								
Applied for at least one patent	28.4	B						
Of these, % that applied for patents in:								
Canada	95.7	B	8.2	B	10.2	B	1.9	A
United States	80.2	B	12.6	B	7.3	B	3.7	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Question 27

This question was not tabulated.

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Interpretative Notes
Tables for Question 28

There are two tables for Question 28. Table 28.1 is for all manufacturing and Table 28.2 is for innovators in manufacturing.

The following contains an explanation of how to read the tables for Question 28 using Table 28.1 as an example.

In Table 28.1, for 'Total Manufacturing Industries', 53.9% of firms indicated that the total number of employees during the period 1997 – 1999 increased. 17.1% indicated that the total number of employees had decreased during the period 1997 – 1999. 23.8% indicated that there was no change in the total number of employees during the period 1997 – 1999. 5.2% did not specify if the total number of employees increased, decreased or did not change during the period 1997 – 1999.

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www.statcan.ca

Table 28.1
Change in the Total Number of Employees During the Period 1997-1999
Canada, All Manufacturing

	Change in Total Number of Employees							
	Increased		Decreased		No Change		Not Specified	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	53.9	A	17.1	A	23.8	A	5.2	A
Food Manufacturing	49.1	A	17.6	A	28.4	A	4.9	A
Beverage and Tobacco Product Manufacturing	34.1	A	38.6	A	21.4	A	5.9	A
Textile Mills	41.8	A	21.3	A	32.5	A	4.4	A
Textile Product Mills	44.9	B	28.4	B	17.4	A	9.3	A
Clothing Manufacturing	41.4	A	20.7	A	29.8	A	8.1	A
Leather and Allied Product Manufacturing	27.1	B	28.1	B	36.1	B	8.7	A
Sawmills and Wood Preservation	50.2	A	15.3	A	27.1	A	7.4	A
Veneer, Plywood and Engineered Wood Product Manufacturing	55.6	A	11.9	A	29.8	A	2.6	A
Other Wood Product Manufacturing	55.1	A	14.6	A	20.7	A	9.6	A
Paper Manufacturing	41.9	A	25.2	A	28.0	A	4.9	A
Printing and Related Support Activities	59.1	A	15.2	A	19.8	A	5.8	A
Petroleum and Coal Products Manufacturing	35.2	A	22.2	A	31.5	A	11.1	A
Chemical Manufacturing (excluding 3254)	43.3	A	26.1	A	24.1	A	6.4	A
Pharmaceutical and Medicine Manufacturing (3254)	64.1	A	6.7	A	17.9	A	11.3	A
Plastics and Rubber Products Manufacturing	59.6	A	11.1	A	25.4	A	4.0	A
Non-Metallic Mineral Products Manufacturing	42.7	A	13.4	A	38.3	A	5.5	A
Primary Metal Manufacturing	49.4	A	22.4	A	22.5	A	5.7	A
Fabricated Metal Product Manufacturing	57.6	A	15.6	A	23.8	A	3.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	51.4	A	28.9	A	16.0	A	3.7	A
Machinery Manufacturing (excluding 3331 & 3332)	61.0	A	15.6	A	19.6	A	3.8	A
Computer and Peripheral Equipment Manufacturing	64.8	B	20.6	A	9.6	B	5.0	A
Communications Equipment Manufacturing	57.7	B	20.0	B	19.2	A	3.2	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	57.3	B	15.8	A	19.8	A	7.1	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	61.1	B	16.7	A	14.6	A	7.7	A
Electrical Equipment, Appliance and Component Manufacturing	55.7	A	15.4	A	22.2	A	6.7	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	61.4	A	13.1	A	20.8	A	4.6	A
Aerospace Product and Parts Manufacturing	60.7	B	21.6	B	12.6	A	5.1	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	64.5	B	16.0	B	16.8	A	2.6	A
Furniture and Related Products Manufacturing	73.3	A	7.5	A	14.8	A	4.3	A
Miscellaneous Manufacturing	57.2	B	15.3	A	22.4	A	5.1	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 28.2
Change in the Total Number of Employees During the Period 1997-1999
Canada, Innovators in Manufacturing

	Change in Total Number of Employees							
	Increased		Decreased		No Change		Not Specified	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries	58.1	A	16.1	A	21.4	A	4.5	A
Food Manufacturing	54.0	A	16.9	A	23.9	A	5.2	A
Beverage and Tobacco Product Manufacturing	37.3	A	40.8	A	17.5	A	4.5	A
Textile Mills	48.8	A	16.6	A	31.0	A	3.6	A
Textile Product Mills	51.0	B	26.5	B	19.0	A	3.5	A
Clothing Manufacturing	47.6	A	16.0	A	28.1	A	8.3	A
Leather and Allied Product Manufacturing	30.9	B	32.4	B	31.5	B	5.1	A
Sawmills and Wood Preservation	56.5	A	17.4	A	20.1	A	6.0	A
Veneer, Plywood and Engineered Wood Product Manufacturing	59.5	B	10.9	A	28.3	B	1.4	A
Other Wood Product Manufacturing	59.8	A	10.6	A	21.0	A	8.7	A
Paper Manufacturing	44.1	A	24.0	A	26.0	A	5.9	A
Printing and Related Support Activities	64.5	B	14.2	A	16.9	A	4.4	A
Petroleum and Coal Products Manufacturing	39.0	A	26.8	A	22.0	A	12.2	A
Chemical Manufacturing (excluding 3254)	47.2	A	25.5	A	21.2	A	6.1	A
Pharmaceutical and Medicine Manufacturing (3254)	65.6	B	5.6	A	18.8	A	10.0	A
Plastics and Rubber Products Manufacturing	61.9	A	10.8	A	24.5	A	2.8	A
Non-Metallic Mineral Products Manufacturing	47.3	A	13.1	A	35.8	A	3.8	A
Primary Metal Manufacturing	53.8	A	21.8	A	19.0	A	5.5	A
Fabricated Metal Product Manufacturing	60.9	A	14.5	A	22.6	A	2.0	A
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	52.7	A	29.4	A	14.2	A	3.7	A
Machinery Manufacturing (excluding 3331 & 3332)	64.0	A	13.2	A	19.7	A	3.1	A
Computer and Peripheral Equipment Manufacturing	65.5	B	19.2	A	10.1	B	5.2	A
Communications Equipment Manufacturing	58.0	B	19.2	B	19.3	A	3.4	A
Audio and Video Equipment Manufacturing	x	A	x	A	x	A	x	A
Semiconductor and Other Electronic Equipment Manufacturing	60.3	B	16.7	A	15.5	A	7.5	A
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	62.0	B	17.4	A	16.0	A	4.6	A
Electrical Equipment, Appliance and Component Manufacturing	59.3	A	14.8	A	21.4	A	4.5	A
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing	66.7	A	14.8	A	15.2	A	3.3	A
Aerospace Product and Parts Manufacturing	63.9	B	20.8	B	11.6	B	3.7	A
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	69.8	B	13.4	B	15.1	B	1.7	A
Furniture and Related Products Manufacturing	78.7	A	5.5	A	11.1	A	4.8	A
Miscellaneous Manufacturing	59.4	B	14.1	A	21.9	A	4.6	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Tables for Question 29

There are two tables for Question 29. Table 29.1 is for all manufacturing and Table 29.2 is for innovators in manufacturing.

The following contains an explanation of how to read the tables for Question 29 using Table 29.1 as an example.

In Table 29.1, for 'Total Manufacturing Industries', 52.9% of firms indicated that they used a government support program during the period 1997 – 1999. Of these:

- 80.6% used programs sponsored by the federal government;
- 73.2% used programs sponsored by provincial governments;
- 53.8% used programs sponsored by both the federal and provincial governments;
- 26.8% used programs sponsored by the federal government only; and
- 19.4% used programs sponsored by provincial governments only.

Also, of the 52.9% of firms who indicated that they used a government support program during the period 1997 – 1999:

- 65.1% used research and development (R&D) tax credit programs, of which:
  - 94.1% used programs sponsored by the federal government;
  - 61.6% used programs sponsored by provincial governments;
  - 55.7% used programs sponsored by both the federal and provincial governments;
  - 38.4% used programs sponsored by the federal government only; and
  - 5.9% used programs sponsored by provincial governments only.

As well, of the 52.9% of firms who indicated that they used a government support program during the period 1997 – 1999:

- 18.6% used government research and development grants, of which:
  - 78.9% were sponsored by the federal government;
  - 44.1% were sponsored by provincial governments;
  - 22.9% were sponsored by both the federal and provincial governments;
  - 55.9% were sponsored by the federal government only; and
  - 21.1% were sponsored by provincial governments only.

…and so on…

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Table 29.1

Use of Government Support Programs During the Period 1997-1999

Canada, All Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By:									
			Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries												
% using any program	**52.9**	**A**	**80.6**	**A**	**73.2**	**A**	**53.8**	**A**	**26.8**	**A**	**19.4**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	65.1	A	94.1	A	61.6	A	55.7	A	38.4	A	5.9	A
Government research and development grants	18.6	A	78.9	A	44.1	A	22.9	A	55.9	A	21.1	A
Government venture capital support	5.2	A	40.4	B	73.1	B	13.5	A	26.9	B	59.6	B
Government technology support and assistance programs	15.3	A	56.2	A	61.8	A	18.1	A	38.2	A	43.8	A
Government information or Internet services	20.5	A	81.4	A	62.6	A	44.1	A	37.4	A	18.6	A
Government support for training	39.0	A	37.7	A	80.5	A	18.2	A	19.5	A	62.3	A
Other	4.3	A	64.1	B	49.5	B	13.5	B	50.5	B	35.9	B
Food Manufacturing												
% using any program	**61.3**	**A**	**79.8**	**A**	**66.3**	**A**	**46.1**	**A**	**33.7**	**A**	**20.2**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	58.1	A	91.0	A	50.5	A	41.4	A	49.5	A	9.0	A
Government research and development grants	22.3	A	70.3	B	54.9	B	25.2	B	45.1	B	29.7	B
Government venture capital support	4.5	A	35.1	C	74.2	B	9.3	B	25.8	B	64.9	C
Government technology support and assistance programs	19.2	A	44.8	B	71.0	B	15.8	B	29.0	B	55.2	B
Government information or Internet services	26.4	A	89.1	A	53.1	B	42.2	B	46.9	B	10.9	A
Government support for training	36.0	A	49.0	B	67.2	B	16.2	A	32.8	B	51.0	B
Other	6.0	A	53.4	C	53.9	C	7.3	B	46.1	C	46.6	C
Beverage and Tobacco Product Manufacturing												
% using any program	**54.4**	**A**	**61.7**	**B**	**79.7**	**A**	**41.4**	**B**	**20.3**	**A**	**38.3**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	40.4	B	90.0	B	54.3	B	44.3	B	45.7	B	10.0	B
Government research and development grants	4.2	A	x	A	x	A	x	A	x	A	x	A
Government venture capital support	6.7	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	4.5	A	x	C	x	C	x	A	x	C	x	C
Government information or Internet services	23.1	B	74.3	B	91.1	B	65.5	B	8.9	B	25.7	B
Government support for training	50.8	B	32.9	B	84.0	A	16.8	B	16.0	A	67.1	B
Other	7.3	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.1
Use of Government Support Programs During the Period 1997-1999
Canada, All Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By: Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Textile Mills												
% using any program	**64.6**	**A**	**89.1**	**A**	**81.0**	**A**	**70.1**	**A**	**19.0**	**A**	**10.9**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	74.7	A	98.7	A	79.3	A	78.1	B	20.7	A	1.3	A
Government research and development grants	10.5	A	73.0	C	63.8	C	36.8	C	36.2	C	27.0	C
Government venture capital support	9.8	A	x	B	x	B	x	B	x	B	x	B
Government technology support and assistance programs	8.6	A	77.0	B	67.1	C	44.1	C	32.9	C	23.0	B
Government information or Internet services	13.1	A	92.1	B	55.2	B	47.3	B	44.8	B	7.9	B
Government support for training	27.8	A	46.8	B	70.3	B	17.0	B	29.7	B	53.2	B
Other	5.8	A	x	C	x	C	x	C	x	C	x	C
Textile Product Mills												
% using any program	**57.8**	**B**	**91.2**	**A**	**68.1**	**B**	**59.3**	**B**	**31.9**	**B**	**8.8**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	73.5	B	90.3	B	70.0	B	60.3	B	30.0	B	9.7	B
Government research and development grants	10.6	B	100.0	A	35.8	C	35.8	C	64.2	C	0.0	A
Government venture capital support	4.0	A	x	C	x	C	x	A	x	C	x	C
Government technology support and assistance programs	15.4	B	68.8	C	39.8	C	8.6	B	60.2	C	31.2	C
Government information or Internet services	21.6	B	100.0	A	29.6	C	29.6	C	70.4	C	0.0	A
Government support for training	32.1	B	42.9	C	57.1	C	0.0	A	42.9	C	57.1	C
Other	7.2	B	x	A	x	D	x	D	x	D	x	A
Clothing Manufacturing												
% using any program	**36.3**	**A**	**69.1**	**B**	**71.6**	**B**	**40.7**	**B**	**28.4**	**B**	**30.9**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	35.8	B	83.3	B	79.5	B	62.8	B	20.5	B	16.7	B
Government research and development grants	10.5	A	88.9	B	47.7	C	36.7	C	52.3	C	11.1	B
Government venture capital support	6.3	A	x	C	x	C	x	A	x	C	x	C
Government technology support and assistance programs	20.1	A	52.8	B	60.8	B	13.6	B	39.2	B	47.2	B
Government information or Internet services	21.8	B	87.4	B	54.4	B	41.8	B	45.6	B	12.6	B
Government support for training	45.7	B	39.9	B	73.8	B	13.7	B	26.2	B	60.1	B
Other	12.5	A	62.2	C	57.5	C	19.7	B	42.5	C	37.8	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.1

Use of Government Support Programs During the Period 1997-1999

Canada, All Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By:									
			Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Leather and Allied Product Manufacturing												
% using any program	**50.0**	**B**	**80.5**	**B**	**82.7**	**B**	**63.2**	**B**	**17.3**	**B**	**19.5**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	58.4	B	91.1	B	95.6	B	86.7	B	4.4	B	8.9	B
Government research and development grants	2.6	A	x	A	x	A	x	A	x	A	x	A
Government venture capital support	7.4	A	x	D	x	A	x	D	x	A	x	D
Government technology support and assistance programs	10.4	B	x	A	x	D	x	D	x	D	x	A
Government information or Internet services	12.1	B	x	C	x	C	x	A	x	C	x	C
Government support for training	34.6	B	7.5	B	92.5	B	0.0	A	7.5	B	92.5	B
Other	13.0	B	x	A	x	D	x	D	x	D	x	A
Sawmills and Wood Preservation												
% using any program	**51.7**	**A**	**71.4**	**A**	**84.4**	**A**	**55.7**	**A**	**15.6**	**A**	**28.6**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	55.8	A	96.7	A	65.6	B	62.4	B	34.4	B	3.3	A
Government research and development grants	22.6	A	51.5	B	61.0	B	12.5	B	39.0	B	48.5	B
Government venture capital support	12.9	A	17.4	B	82.6	B	0.0	A	17.4	B	82.6	B
Government technology support and assistance programs	23.0	A	41.3	B	82.7	B	24.1	B	17.3	B	58.7	B
Government information or Internet services	17.3	A	60.1	B	88.9	B	49.0	B	11.1	B	39.9	B
Government support for training	51.2	A	44.0	B	82.5	B	26.5	B	17.5	B	56.0	B
Other	1.5	A	x	A	x	A	x	A	x	A	x	A
Veneer, Plywood and Engineered Wood Product Manufacturing												
% using any program	**41.1**	**A**	**73.1**	**B**	**82.7**	**B**	**55.9**	**B**	**17.3**	**B**	**26.9**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	51.9	B	100.0	A	50.7	B	50.7	B	49.3	B	0.0	A
Government research and development grants	22.6	B	48.6	C	60.8	C	9.5	B	39.2	C	51.4	C
Government venture capital support	10.7	B	x	C	x	A	x	C	x	A	x	C
Government technology support and assistance programs	9.4	A	x	A	x	C	x	C	x	C	x	A
Government information or Internet services	16.3	B	69.6	C	86.9	C	56.5	C	13.1	C	30.4	C
Government support for training	41.3	B	46.2	B	80.6	B	26.8	B	19.4	B	53.8	B
Other	2.3	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.1

Use of Government Support Programs During the Period 1997-1999

Canada, All Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By:									
			Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Other Wood Product Manufacturing												
% using any program	38.4	A	66.0	B	77.8	B	43.8	B	22.2	B	34.0	B
Of these, % using the following programs:												
Research and development (R&D) tax credits	48.5	B	85.8	B	77.0	B	62.8	B	23.0	B	14.2	B
Government research and development grants	19.2	B	56.1	C	59.6	C	15.7	B	40.4	C	43.9	C
Government venture capital support	15.0	A	48.9	C	59.0	C	7.9	B	41.0	C	51.1	C
Government technology support and assistance programs	19.9	B	49.8	C	77.9	B	27.8	C	22.1	B	50.2	C
Government information or Internet services	17.5	B	71.5	C	65.6	C	37.1	C	34.4	C	28.5	C
Government support for training	43.7	B	28.7	B	89.0	B	17.6	B	11.0	B	71.3	B
Other	5.8	A	x	D	x	D	x	A	x	D	x	D
Paper Manufacturing												
% using any program	54.3	A	83.8	A	80.3	A	64.1	A	19.7	A	16.2	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	65.4	A	97.0	A	62.7	A	59.7	A	37.3	A	3.0	A
Government research and development grants	13.7	A	76.4	B	50.1	B	26.4	B	49.9	B	23.6	B
Government venture capital support	6.4	A	49.2	B	90.1	A	39.3	B	9.9	A	50.8	B
Government technology support and assistance programs	14.9	A	57.8	B	42.2	B	0.0	A	57.8	B	42.2	B
Government information or Internet services	20.1	A	96.8	A	53.5	B	50.3	B	46.5	B	3.2	A
Government support for training	44.7	A	41.5	B	80.1	A	21.6	A	19.9	A	58.5	B
Other	2.6	A	x	C	x	C	x	A	x	C	x	C
Printing and Related Support Activities												
% using any program	30.2	A	69.8	B	72.8	B	42.6	B	27.2	B	30.2	B
Of these, % using the following programs:												
Research and development (R&D) tax credits	33.9	B	90.6	B	77.1	C	67.7	C	22.9	C	9.4	B
Government research and development grants	5.1	B	100.0	A	...	D	...	D	...	D	0.0	A
Government venture capital support	7.0	A	x	C	x	C	x	A	x	C	x	C
Government technology support and assistance programs	9.0	A	47.4	C	52.6	C	0.0	A	47.4	C	52.6	C
Government information or Internet services	28.4	B	79.2	B	73.0	B	52.2	C	27.0	B	20.8	B
Government support for training	45.8	B	45.5	B	65.0	B	10.5	B	35.0	B	54.5	B
Other	4.3	A	x	A	x	D	x	D	x	D	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.1

Use of Government Support Programs During the Period 1997-1999

Canada, All Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By:									
			Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing												
% using any program	62.0	A	85.1	A	71.6	A	56.7	A	28.4	A	14.9	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	88.1	A	93.2	A	40.7	A	33.9	A	59.3	A	6.8	A
Government research and development grants	11.9	A	x	A	x	A	x	A	x	A	x	A
Government venture capital support	9.0	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	11.9	A	x	A	x	A	x	A	x	A	x	A
Government information or Internet services	44.8	A	80.0	A	73.3	A	53.3	A	26.7	A	20.0	A
Government support for training	11.9	A	x	A	x	A	x	A	x	A	x	A
Other	6.0	A	x	A	x	A	x	A	x	A	x	A
Chemical Manufacturing (excluding 3254)												
% using any program	64.9	A	87.6	A	71.5	A	59.0	A	28.5	A	12.4	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	80.7	A	96.8	A	62.3	A	59.2	A	37.7	A	3.2	A
Government research and development grants	21.5	A	79.0	B	25.5	B	4.6	A	74.5	B	21.0	B
Government venture capital support	1.1	A	x	D	x	D	x	A	x	D	x	D
Government technology support and assistance programs	11.6	A	51.0	B	73.1	B	24.1	B	26.9	B	49.0	B
Government information or Internet services	22.8	A	71.3	B	53.8	B	25.1	B	46.2	B	28.7	B
Government support for training	23.5	A	37.8	B	79.8	B	17.6	B	20.2	B	62.2	B
Other	0.4	A	x	A	x	A	x	A	x	A	x	A
Pharmaceutical and Medicine Manufacturing (3254)												
% using any program	91.1	A	86.3	A	92.7	A	79.0	A	7.3	A	13.7	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	84.6	A	95.8	A	74.7	A	70.5	A	25.3	A	4.2	A
Government research and development grants	14.9	A	88.1	A	25.4	B	13.5	B	74.6	B	11.9	A
Government venture capital support	2.0	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	17.4	A	52.3	B	47.7	B	0.0	A	52.3	B	47.7	B
Government information or Internet services	33.9	A	86.0	B	83.0	B	69.0	B	17.0	B	14.0	B
Government support for training	37.5	B	24.2	B	89.9	B	14.2	A	10.1	B	75.8	B
Other	3.8	A	x	C	x	A	x	C	x	A	x	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.1

Use of Government Support Programs During the Period 1997-1999

Canada, All Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By: Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Plastics and Rubber Products Manufacturing												
% using any program	56.6	A	86.2	A	75.3	A	61.5	A	24.7	A	13.8	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	72.1	A	93.9	A	65.9	B	59.8	B	34.1	B	6.1	A
Government research and development grants	25.0	A	89.9	B	19.7	B	9.6	B	80.3	B	10.1	B
Government venture capital support	3.7	A	54.8	C	63.8	C	18.6	B	36.2	C	45.2	C
Government technology support and assistance programs	16.2	A	73.1	B	37.1	B	10.2	B	62.9	B	26.9	B
Government information or Internet services	17.4	A	83.7	B	68.3	B	52.0	B	31.7	B	16.3	B
Government support for training	35.8	A	36.9	B	80.6	B	17.5	B	19.4	B	63.1	B
Other	3.6	A	56.3	C	53.2	C	9.6	A	46.8	C	43.7	C
Non-Metallic Mineral Products Manufacturing												
% using any program	36.9	A	76.7	A	73.0	B	49.8	B	27.0	B	23.3	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	63.0	B	96.1	A	58.2	B	54.3	B	41.8	B	3.9	A
Government research and development grants	19.6	A	85.0	B	55.2	B	40.3	B	44.8	B	15.0	B
Government venture capital support	2.3	A	x	D	x	A	x	D	x	A	x	D
Government technology support and assistance programs	6.6	A	48.3	C	51.7	C	0.0	A	48.3	C	51.7	C
Government information or Internet services	25.4	B	66.0	B	69.8	B	35.8	B	30.2	B	34.0	B
Government support for training	36.7	B	36.7	B	84.4	A	21.1	B	15.6	A	63.3	B
Other	3.1	A	x	C	x	A	x	C	x	A	x	C
Primary Metal Manufacturing												
% using any program	53.0	A	84.6	A	71.8	A	56.3	A	28.2	A	15.4	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	71.1	A	97.0	A	62.2	B	59.1	B	37.8	B	3.0	A
Government research and development grants	15.7	A	83.0	A	44.7	B	27.7	B	55.3	B	17.0	A
Government venture capital support	0.9	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	15.5	A	74.6	B	36.7	B	11.3	A	63.3	B	25.4	B
Government information or Internet services	28.0	A	96.6	A	56.2	B	52.8	B	43.8	B	3.4	A
Government support for training	46.6	A	44.3	B	74.6	B	18.9	A	25.4	B	55.7	B
Other	1.8	A	x	C	x	C	x	A	x	C	x	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.1

Use of Government Support Programs During the Period 1997-1999

Canada, All Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By:									
			Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing												
% using any program	45.0	A	75.9	A	70.6	B	46.4	B	29.4	B	24.1	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	61.0	B	94.6	A	55.4	B	50.0	B	44.6	B	5.4	A
Government research and development grants	18.9	A	84.6	B	40.1	B	24.7	B	59.9	B	15.4	B
Government venture capital support	3.6	A	59.2	C	...	D	16.5	C	...	D	40.8	C
Government technology support and assistance programs	13.8	A	56.4	B	68.4	B	24.9	B	31.6	B	43.6	B
Government information or Internet services	14.7	A	91.1	B	58.2	C	49.3	C	41.8	C	8.9	B
Government support for training	43.8	B	24.4	B	86.9	B	11.3	B	13.1	B	75.6	B
Other	3.0	A	...	D	...	D	10.0	C	...	D	...	D
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)												
% using any program	67.4	A	92.8	A	75.0	A	67.8	A	25.0	A	7.2	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	85.6	A	100.0	A	68.5	A	68.5	A	31.5	A	0.0	A
Government research and development grants	28.5	A	85.7	B	50.3	B	36.0	B	49.7	B	14.3	B
Government venture capital support	3.6	A	x	C	x	C	x	C	x	C	x	C
Government technology support and assistance programs	16.1	A	52.6	B	57.0	B	9.7	B	43.0	B	47.4	B
Government information or Internet services	22.7	A	83.5	B	62.5	B	46.0	B	37.5	B	16.5	B
Government support for training	23.0	A	52.6	B	78.9	B	31.5	B	21.1	B	47.4	B
Other	3.0	A	x	C	x	C	x	A	x	C	x	C
Machinery Manufacturing (excluding 3331 & 3332)												
% using any program	72.4	A	82.2	A	71.8	B	54.0	B	28.2	B	17.8	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	76.1	A	94.6	A	57.2	B	51.8	B	42.8	B	5.4	A
Government research and development grants	14.6	A	78.8	B	58.2	B	37.0	B	41.8	B	21.2	B
Government venture capital support	3.5	A	25.1	C	82.5	C	7.5	B	17.5	C	74.9	C
Government technology support and assistance programs	14.9	A	49.6	B	69.8	B	19.4	B	30.2	B	50.4	B
Government information or Internet services	12.9	A	60.2	B	76.4	B	36.6	B	23.6	B	39.8	B
Government support for training	39.4	B	28.3	B	86.4	B	14.7	B	13.6	B	71.7	B
Other	3.8	A	82.5	B	17.5	B	0.0	A	82.5	B	17.5	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.1

Use of Government Support Programs During the Period 1997-1999

Canada, All Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By:									
			Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Computer and Peripheral Equipment Manufacturing												
% using any program	75.6	B	100.0	A	54.4	B	54.4	B	45.6	B	0.0	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	80.9	B	100.0	A	56.4	B	56.4	B	43.6	B	0.0	A
Government research and development grants	28.9	B	52.5	C	89.8	A	42.4	C	10.2	A	47.5	C
Government venture capital support	0.0	A	-	-	-	-	-	-	-	-	-	-
Government technology support and assistance programs	18.1	B	x	A	x	C	x	C	x	C	x	A
Government information or Internet services	15.4	B	x	A	x	C	x	C	x	C	x	A
Government support for training	44.1	B	70.0	B	63.3	B	33.3	B	36.7	B	30.0	B
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Communications Equipment Manufacturing												
% using any program	75.7	B	94.0	A	77.7	A	71.7	A	22.3	A	6.0	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	98.0	A	93.9	A	71.0	A	64.8	A	29.0	A	6.1	A
Government research and development grants	41.0	B	100.0	A	10.2	B	10.2	B	89.8	B	0.0	A
Government venture capital support	8.7	A	x	C	x	C	x	A	x	C	x	C
Government technology support and assistance programs	20.2	B	90.1	B	30.5	C	20.6	B	69.5	C	9.9	B
Government information or Internet services	19.7	B	89.8	B	52.5	C	42.4	C	47.5	C	10.2	B
Government support for training	37.4	B	37.6	B	79.3	B	16.9	B	20.7	B	62.4	B
Other	2.2	A	x	A	x	A	x	A	x	A	x	A
Audio and Video Equipment Manufacturing												
% using any program	x	A	x	A	x	A	x	A	x	A	x	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	x	A	x	A	x	A	x	A	x	A	x	A
Government research and development grants	x	A	x	A	x	A	x	A	x	A	x	A
Government venture capital support	x	A	-	-	-	-	-	-	-	-	-	-
Government technology support and assistance programs	x	A	x	A	x	A	x	A	x	A	x	A
Government information or Internet services	x	A	-	-	-	-	-	-	-	-	-	-
Government support for training	x	A	x	A	x	A	x	A	x	A	x	A
Other	x	A	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.1

Use of Government Support Programs During the Period 1997-1999

Canada, All Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By: Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing												
% using any program	76.0	B	87.8	A	74.3	B	62.1	B	25.7	B	12.2	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	91.7	A	92.6	A	65.9	B	58.4	B	34.1	B	7.4	A
Government research and development grants	20.6	B	x	A	x	C	x	C	x	C	x	A
Government venture capital support	21.8	B	x	C	x	A	x	C	x	A	x	C
Government technology support and assistance programs	30.1	B	27.1	C	81.9	B	9.0	B	18.1	B	72.9	C
Government information or Internet services	8.5	A	x	A	x	C	x	C	x	C	x	A
Government support for training	35.7	B	35.2	B	100.0	A	35.2	B	0.0	A	64.8	B
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media												
% using any program	68.2	B	91.1	A	86.9	A	78.0	A	13.1	A	8.9	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	92.3	A	94.7	A	70.5	A	65.3	A	29.5	A	5.3	A
Government research and development grants	37.9	B	63.1	B	71.9	B	35.0	B	28.1	B	36.9	B
Government venture capital support	11.2	B	60.5	C	75.3	C	...	D	24.7	C	39.5	C
Government technology support and assistance programs	22.2	B	44.3	B	71.7	B	16.0	B	28.3	B	55.7	B
Government information or Internet services	18.7	A	93.3	A	34.0	C	27.3	C	66.0	C	6.7	A
Government support for training	32.7	B	37.1	B	92.7	A	29.8	B	7.3	A	62.9	B
Other	1.1	A	x	A	x	A	x	A	x	A	x	A
Electrical Equipment, Appliance and Component Manufacturing												
% using any program	68.6	A	86.2	A	69.7	A	55.9	B	30.3	A	13.8	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	77.1	A	96.4	A	50.9	B	47.4	B	49.1	B	3.6	A
Government research and development grants	19.8	A	89.6	A	39.5	B	29.1	B	60.5	B	10.4	A
Government venture capital support	5.3	A	x	C	x	B	x	B	x	B	x	C
Government technology support and assistance programs	19.0	A	48.4	B	59.4	B	7.8	A	40.6	B	51.6	B
Government information or Internet services	17.8	A	92.3	A	65.3	B	57.6	B	34.7	B	7.7	A
Government support for training	39.2	B	55.5	B	89.2	B	44.7	B	10.8	B	44.5	B
Other	3.1	A	x	A	x	C	x	C	x	C	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.1

Use of Government Support Programs During the Period 1997-1999

Canada, All Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By:									
			Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing												
% using any program	**53.1**	**A**	**90.9**	**A**	**75.6**	**B**	**66.5**	**B**	**24.4**	**B**	**9.1**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	81.8	B	93.9	A	69.0	B	62.9	B	31.0	B	6.1	A
Government research and development grants	18.5	A	90.5	B	23.1	B	13.7	B	76.9	B	9.5	B
Government venture capital support	3.2	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	16.8	A	83.5	B	31.9	B	15.4	B	68.1	B	16.5	B
Government information or Internet services	25.5	B	78.1	B	75.6	B	53.6	B	24.4	B	21.9	B
Government support for training	39.4	B	44.2	B	85.8	B	30.0	B	14.2	B	55.8	B
Other	3.5	A	x	C	x	D	x	D	x	D	x	C
Aerospace Product and Parts Manufacturing												
% using any program	**81.4**	**B**	**80.9**	**B**	**77.1**	**B**	**57.9**	**B**	**22.9**	**B**	**19.1**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	56.0	B	92.4	B	62.5	B	54.9	B	37.5	B	7.6	B
Government research and development grants	21.0	B	90.3	B	57.5	B	47.9	C	42.5	B	9.7	B
Government venture capital support	9.3	A	x	C	x	B	x	C	x	B	x	C
Government technology support and assistance programs	27.6	B	92.6	B	58.4	B	51.1	B	41.6	B	7.4	B
Government information or Internet services	30.6	B	93.4	B	36.3	B	29.6	B	63.7	B	6.6	B
Government support for training	61.1	B	45.3	B	72.3	B	17.6	B	27.7	B	54.7	B
Other	9.7	A	x	C	x	C	x	A	x	C	x	C
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment												
% using any program	**65.4**	**B**	**87.4**	**B**	**76.2**	**B**	**63.6**	**B**	**23.8**	**B**	**12.6**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	70.0	B	91.1	B	54.2	B	45.3	B	45.8	B	8.9	B
Government research and development grants	10.6	A	x	C	x	B	x	C	x	B	x	C
Government venture capital support	0.0	A	-	-	-	-	-	-	-	-	-	-
Government technology support and assistance programs	13.8	B	x	C	x	C	x	A	x	C	x	C
Government information or Internet services	35.1	B	59.3	C	80.0	B	39.3	C	20.0	B	40.7	C
Government support for training	47.4	B	33.5	B	84.7	C	18.2	B	15.3	C	66.5	B
Other	6.4	B	x	D	x	D	x	A	x	D	x	D

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.1

Use of Government Support Programs During the Period 1997-1999

Canada, All Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By: Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing												
% using any program	**45.7**	**A**	**76.4**	**B**	**65.4**	**B**	**41.8**	**B**	**34.6**	**B**	**23.6**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	48.6	B	93.6	A	48.3	B	41.8	B	51.7	B	6.4	A
Government research and development grants	13.9	A	92.8	B	15.6	B	8.4	B	84.4	B	7.2	B
Government venture capital support	3.3	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	12.4	A	40.1	C	83.0	C	23.1	B	17.0	C	59.9	C
Government information or Internet services	12.4	A	90.3	B	40.1	C	30.4	C	59.9	C	9.7	B
Government support for training	44.6	B	39.1	B	80.9	B	20.0	B	19.1	B	60.9	B
Other	10.4	A	70.9	C	37.8	C	8.7	A	62.2	C	29.1	C
Miscellaneous Manufacturing												
% using any program	**51.2**	**B**	**71.7**	**B**	**74.3**	**B**	**46.0**	**B**	**25.7**	**B**	**28.3**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	52.4	B	88.0	A	64.9	B	52.9	B	35.1	B	12.0	A
Government research and development grants	20.7	B	72.7	B	37.6	B	10.3	B	62.4	B	27.3	B
Government venture capital support	8.2	A	23.7	C	76.3	C	0.0	A	23.7	C	76.3	C
Government technology support and assistance programs	8.6	A	79.8	C	65.6	C	45.4	C	34.4	C	20.2	C
Government information or Internet services	29.0	B	64.1	B	79.0	B	43.1	B	21.0	B	35.9	B
Government support for training	39.1	B	25.3	B	89.0	B	14.3	B	11.0	B	74.7	B
Other	1.4	A	x	D	x	D	x	A	x	D	x	D

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.2

Use of Government Support Programs During the Period 1997-1999

Canada, Innovators in Manufacturing

			Of These, % Using Programs Sponsored By:									
	% Using a Program		Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Total Manufacturing Industries												
% using any program	58.3	A	82.2	A	73.0	A	55.3	A	27.0	A	17.8	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	67.9	A	94.3	A	62.0	A	56.3	A	38.0	A	5.7	A
Government research and development grants	20.1	A	79.4	A	43.1	A	22.5	A	56.9	A	20.6	A
Government venture capital support	5.3	A	42.4	B	71.4	A	13.7	A	28.6	A	57.6	B
Government technology support and assistance programs	16.0	A	56.9	A	61.6	A	18.5	A	38.4	A	43.1	A
Government information or Internet services	19.9	A	81.0	A	62.5	A	43.5	A	37.5	A	19.0	A
Government support for training	38.3	A	38.4	A	80.2	A	18.6	A	19.8	A	61.6	A
Other	4.1	A	62.2	B	52.0	B	14.1	B	48.0	B	37.8	B
Food Manufacturing												
% using any program	67.0	A	81.4	A	66.0	A	47.5	A	34.0	A	18.6	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	60.0	A	93.5	A	49.4	A	42.8	A	50.6	A	6.5	A
Government research and development grants	24.8	A	71.6	B	54.1	B	25.7	B	45.9	B	28.4	B
Government venture capital support	4.9	A	36.8	C	73.0	B	9.8	B	27.0	B	63.2	C
Government technology support and assistance programs	19.1	A	42.0	B	72.0	B	14.0	B	28.0	B	58.0	B
Government information or Internet services	24.5	A	91.1	A	49.4	B	40.5	B	50.6	B	8.9	A
Government support for training	37.3	A	46.7	B	69.0	B	15.7	A	31.0	B	53.3	B
Other	6.4	A	57.6	C	50.3	C	7.9	B	49.7	C	42.4	C
Beverage and Tobacco Product Manufacturing												
% using any program	54.6	A	68.4	B	78.9	A	47.3	B	21.1	A	31.6	B
Of these, % using the following programs:												
Research and development (R&D) tax credits	47.3	B	88.9	B	54.6	B	43.5	B	45.4	B	11.1	B
Government research and development grants	2.7	A	x	A	x	A	x	A	x	A	x	A
Government venture capital support	5.9	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	5.9	A	x	C	x	C	x	A	x	C	x	C
Government information or Internet services	21.0	B	75.4	B	100.0	A	75.4	B	0.0	A	24.6	B
Government support for training	50.4	B	37.8	B	84.3	B	22.0	B	15.7	B	62.2	B
Other	9.5	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.2

Use of Government Support Programs During the Period 1997-1999

Canada, Innovators in Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By:									
			Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Textile Mills												
% using any program	**74.4**	**A**	**90.2**	**A**	**80.7**	**A**	**71.0**	**A**	**19.3**	**A**	**9.8**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	75.7	A	98.7	A	79.3	A	78.1	B	20.7	A	1.3	A
Government research and development grants	10.7	A	73.0	C	63.8	C	36.8	C	36.2	C	27.0	C
Government venture capital support	9.9	A	x	B	x	B	x	B	x	B	x	B
Government technology support and assistance programs	8.7	A	77.0	B	67.1	C	44.1	C	32.9	C	23.0	B
Government information or Internet services	13.2	A	92.1	B	55.2	B	47.3	B	44.8	B	7.9	B
Government support for training	26.9	A	49.0	B	68.9	B	17.8	B	31.1	B	51.0	B
Other	5.9	A	x	C	x	C	x	C	x	C	x	C
Textile Product Mills												
% using any program	**59.7**	**B**	**91.4**	**A**	**63.0**	**B**	**54.4**	**B**	**37.0**	**B**	**8.6**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	70.9	B	88.3	B	63.9	B	52.3	B	36.1	B	11.7	B
Government research and development grants	12.3	B	100.0	A	35.8	C	35.8	C	64.2	C	0.0	A
Government venture capital support	4.6	A	x	C	x	C	x	A	x	C	x	C
Government technology support and assistance programs	17.9	B	68.8	C	39.8	C	8.6	B	60.2	C	31.2	C
Government information or Internet services	25.0	B	100.0	A	29.6	C	29.6	C	70.4	C	0.0	A
Government support for training	35.6	B	44.7	C	55.3	C	0.0	A	44.7	C	55.3	C
Other	8.3	B	x	A	x	D	x	D	x	D	x	A
Clothing Manufacturing												
% using any program	**42.5**	**A**	**66.8**	**B**	**74.0**	**B**	**40.8**	**B**	**26.0**	**B**	**33.2**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	38.5	B	80.9	B	85.3	B	66.2	B	14.7	B	19.1	B
Government research and development grants	12.2	A	88.3	C	44.6	C	32.9	C	55.4	C	11.7	C
Government venture capital support	6.4	A	x	C	x	C	x	A	x	C	x	C
Government technology support and assistance programs	21.3	B	57.8	B	58.0	B	15.8	B	42.0	B	42.2	B
Government information or Internet services	19.8	B	82.9	B	49.1	B	32.0	B	50.9	B	17.1	B
Government support for training	48.5	B	39.3	B	75.1	B	14.4	B	24.9	B	60.7	B
Other	12.4	A	59.2	C	65.1	C	24.3	B	34.9	C	40.8	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.2

Use of Government Support Programs During the Period 1997-1999

Canada, Innovators in Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By: Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Leather and Allied Product Manufacturing												
% using any program	**54.1**	**B**	**83.9**	**B**	**77.8**	**B**	**61.7**	**B**	**22.2**	**B**	**16.1**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	65.6	B	89.8	B	94.9	B	84.7	B	5.1	B	10.2	B
Government research and development grants	3.3	A	x	A	x	A	x	A	x	A	x	A
Government venture capital support	9.4	B	x	D	x	A	x	D	x	A	x	D
Government technology support and assistance programs	13.3	B	x	A	x	D	x	D	x	D	x	A
Government information or Internet services	12.2	B	x	D	x	D	x	A	x	D	x	D
Government support for training	32.2	B	10.3	B	89.7	B	0.0	A	10.3	B	89.7	B
Other	10.0	B	x	A	x	A	x	A	x	A	x	A
Sawmills and Wood Preservation												
% using any program	**56.4**	**A**	**75.9**	**A**	**85.7**	**A**	**61.6**	**A**	**14.3**	**A**	**24.1**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	57.4	A	96.0	A	67.3	B	63.4	B	32.7	B	4.0	A
Government research and development grants	23.6	A	51.5	B	59.5	B	11.0	B	40.5	B	48.5	B
Government venture capital support	16.1	A	17.4	B	82.6	B	0.0	A	17.4	B	82.6	B
Government technology support and assistance programs	25.5	A	33.9	B	89.6	A	23.5	B	10.4	A	66.1	B
Government information or Internet services	20.7	A	62.6	B	88.4	B	51.0	B	11.6	B	37.4	B
Government support for training	52.5	A	50.8	B	81.5	B	32.2	B	18.5	B	49.2	B
Other	1.9	A	x	A	x	A	x	A	x	A	x	A
Veneer, Plywood and Engineered Wood Product Manufacturing												
% using any program	**52.6**	**B**	**74.0**	**B**	**83.0**	**B**	**57.0**	**B**	**17.0**	**B**	**26.0**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	62.6	B	100.0	A	50.7	B	50.7	B	49.3	B	0.0	A
Government research and development grants	27.2	B	48.6	C	60.8	C	9.5	B	39.2	C	51.4	C
Government venture capital support	7.7	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	11.4	B	x	A	x	C	x	C	x	C	x	A
Government information or Internet services	19.6	B	69.6	C	86.9	C	56.5	C	13.1	C	30.4	C
Government support for training	34.3	B	40.7	C	83.1	B	23.8	B	16.9	B	59.3	C
Other	2.8	A	x	A	x	A	x	A	x	A	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.2

Use of Government Support Programs During the Period 1997-1999

Canada, Innovators in Manufacturing

			Of These, % Using Programs Sponsored By:									
	% Using a Program		Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Other Wood Product Manufacturing												
% using any program	**41.7**	**A**	**66.8**	**B**	**83.1**	**B**	**49.9**	**B**	**16.9**	**B**	**33.2**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	51.6	B	84.1	B	81.6	B	65.7	B	18.4	B	15.9	B
Government research and development grants	21.8	B	54.0	C	57.6	C	11.6	B	42.4	C	46.0	C
Government venture capital support	16.5	B	53.2	C	55.4	C	8.6	B	44.6	C	46.8	C
Government technology support and assistance programs	22.7	B	47.5	C	76.9	B	24.4	C	23.1	B	52.5	C
Government information or Internet services	16.5	B	63.9	C	82.9	C	46.9	C	17.1	C	36.1	C
Government support for training	46.8	B	29.7	B	87.7	B	17.4	B	12.3	B	70.3	B
Other	3.9	A	x	A	x	A	x	A	x	A	x	A
Paper Manufacturing												
% using any program	**57.9**	**A**	**86.9**	**A**	**81.1**	**A**	**68.0**	**A**	**18.9**	**A**	**13.1**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	70.4	A	98.8	A	62.9	A	61.7	A	37.1	A	1.2	A
Government research and development grants	15.7	A	80.2	B	47.6	B	27.8	B	52.4	B	19.8	B
Government venture capital support	5.3	A	x	B	x	A	x	B	x	A	x	B
Government technology support and assistance programs	14.2	A	64.5	B	35.5	B	0.0	A	64.5	B	35.5	B
Government information or Internet services	22.7	A	96.5	A	50.4	B	47.0	B	49.6	B	3.5	A
Government support for training	42.9	A	37.9	B	81.5	A	19.4	B	18.5	A	62.1	B
Other	2.3	A	x	C	x	C	x	A	x	C	x	C
Printing and Related Support Activities												
% using any program	**31.4**	**B**	**68.4**	**B**	**74.5**	**B**	**43.0**	**B**	**25.5**	**B**	**31.6**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	34.5	B	89.5	B	76.3	C	65.9	C	23.7	C	10.5	B
Government research and development grants	5.8	B	100.0	A	...	D	...	D	...	D	0.0	A
Government venture capital support	7.9	A	x	C	x	C	x	A	x	C	x	C
Government technology support and assistance programs	5.6	A	x	D	x	D	x	A	x	D	x	D
Government information or Internet services	24.8	B	73.0	C	86.9	C	59.9	C	13.1	C	27.0	C
Government support for training	46.7	B	46.5	B	65.1	B	11.7	B	34.9	B	53.5	B
Other	2.2	A	x	A	x	D	x	D	x	D	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.2

Use of Government Support Programs During the Period 1997-1999

Canada, Innovators in Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By: Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Petroleum and Coal Products Manufacturing												
% using any program	**68.3**	**A**	**85.7**	**A**	**78.6**	**A**	**64.3**	**A**	**21.4**	**A**	**14.3**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	89.3	A	92.0	A	44.0	A	36.0	A	56.0	A	8.0	A
Government research and development grants	14.3	A	x	A	x	A	x	A	x	A	x	A
Government venture capital support	10.7	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	10.7	A	x	A	x	A	x	A	x	A	x	A
Government information or Internet services	46.4	A	84.6	A	69.2	A	53.8	A	30.8	A	15.4	A
Government support for training	14.3	A	x	A	x	A	x	A	x	A	x	A
Other	7.1	A	x	A	x	A	x	A	x	A	x	A
Chemical Manufacturing (excluding 3254)												
% using any program	**69.4**	**A**	**87.2**	**A**	**72.7**	**A**	**59.9**	**A**	**27.3**	**A**	**12.8**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	80.8	A	96.6	A	62.7	A	59.3	A	37.3	A	3.4	A
Government research and development grants	23.0	A	79.0	B	25.5	B	4.6	A	74.5	B	21.0	B
Government venture capital support	1.2	A	x	D	x	D	x	A	x	D	x	D
Government technology support and assistance programs	12.4	A	51.0	B	73.1	B	24.1	B	26.9	B	49.0	B
Government information or Internet services	22.4	A	68.9	B	58.3	B	27.2	B	41.7	B	31.1	B
Government support for training	24.6	A	36.6	B	81.4	B	18.0	B	18.6	B	63.4	B
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Pharmaceutical and Medicine Manufacturing (3254)												
% using any program	**91.6**	**A**	**89.4**	**A**	**93.9**	**A**	**83.2**	**A**	**6.1**	**A**	**10.6**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	87.3	A	95.3	A	83.4	A	78.7	A	16.6	A	4.7	A
Government research and development grants	17.1	A	88.1	A	25.4	B	13.5	B	74.6	B	11.9	A
Government venture capital support	2.3	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	20.0	A	52.3	B	47.7	B	0.0	A	52.3	B	47.7	B
Government information or Internet services	37.0	B	85.3	B	82.0	B	67.3	B	18.0	B	14.7	B
Government support for training	32.4	B	32.3	B	86.6	B	18.9	A	13.4	B	67.7	B
Other	4.3	A	x	C	x	A	x	C	x	A	x	C

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.2

Use of Government Support Programs During the Period 1997-1999

Canada, Innovators in Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By:									
			Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Plastics and Rubber Products Manufacturing												
% using any program	**59.7**	**A**	**87.3**	**A**	**75.4**	**A**	**62.7**	**A**	**24.8**	**A**	**12.7**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	74.5	A	93.9	A	65.0	B	58.9	B	35.0	B	6.1	A
Government research and development grants	26.6	A	89.5	B	20.5	B	10.0	B	79.5	B	10.5	B
Government venture capital support	3.0	A	75.4	C	50.2	C	25.6	B	49.8	C	24.6	C
Government technology support and assistance programs	16.6	A	79.1	B	32.0	B	11.0	B	68.0	B	20.9	B
Government information or Internet services	16.5	A	83.1	B	75.2	B	58.3	B	24.8	B	16.9	B
Government support for training	34.4	A	38.4	B	81.7	B	20.1	B	18.3	B	61.6	B
Other	3.4	A	49.2	C	62.0	C	11.2	B	38.0	C	50.8	C
Non-Metallic Mineral Products Manufacturing												
% using any program	**43.8**	**A**	**78.7**	**B**	**75.9**	**B**	**54.7**	**B**	**24.1**	**B**	**21.3**	**B**
Of these, % using the following programs:												
Research and development (R&D) tax credits	62.5	B	97.4	A	61.0	B	58.3	B	39.0	B	2.6	A
Government research and development grants	19.9	A	87.3	B	54.5	B	41.8	B	45.5	B	12.7	B
Government venture capital support	2.7	A	x	D	x	A	x	D	x	A	x	D
Government technology support and assistance programs	5.7	A	x	C	x	C	x	A	x	C	x	C
Government information or Internet services	26.6	B	66.4	B	70.2	B	36.6	B	29.8	B	33.6	B
Government support for training	37.6	B	39.6	B	84.6	A	24.2	B	15.4	A	60.4	B
Other	3.7	A	x	C	x	A	x	C	x	A	x	C
Primary Metal Manufacturing												
% using any program	**57.9**	**A**	**86.2**	**A**	**68.4**	**A**	**54.6**	**A**	**31.6**	**A**	**13.8**	**A**
Of these, % using the following programs:												
Research and development (R&D) tax credits	72.4	A	96.4	A	58.7	B	55.1	B	41.3	B	3.6	A
Government research and development grants	18.0	A	82.0	B	41.4	B	23.4	B	58.6	B	18.0	B
Government venture capital support	1.1	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	17.7	A	73.1	B	39.0	B	12.0	A	61.0	B	26.9	B
Government information or Internet services	26.4	A	100.0	A	53.8	B	53.8	B	46.2	B	0.0	A
Government support for training	48.0	B	47.7	B	70.1	B	17.8	B	29.9	B	52.3	B
Other	0.0	A	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.2
Use of Government Support Programs During the Period 1997-1999
Canada, Innovators in Manufacturing

			Of These, % Using Programs Sponsored By:									
	% Using a Program		Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Fabricated Metal Product Manufacturing												
% using any program	50.7	A	80.6	A	67.5	B	48.1	B	32.5	B	19.4	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	65.6	B	94.9	A	57.4	B	52.3	B	42.6	B	5.1	A
Government research and development grants	19.6	A	86.4	B	34.2	B	20.5	B	65.8	B	13.6	B
Government venture capital support	2.8	A	x	C	x	D	x	C	x	D	x	C
Government technology support and assistance programs	15.9	A	58.6	B	67.2	B	25.8	B	32.8	B	41.4	B
Government information or Internet services	13.5	A	93.1	B	50.4	C	43.5	C	49.6	C	6.9	B
Government support for training	39.6	B	27.6	B	83.4	B	10.9	B	16.6	B	72.4	B
Other	3.2	A	...	D	...	D	11.3	C	...	D	...	D
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)												
% using any program	72.0	A	93.1	A	74.1	A	67.2	A	25.9	A	6.9	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	88.0	A	100.0	A	68.3	A	68.3	A	31.7	A	0.0	A
Government research and development grants	29.6	A	87.9	B	49.0	B	36.9	B	51.0	B	12.1	B
Government venture capital support	3.9	A	x	C	x	C	x	C	x	C	x	C
Government technology support and assistance programs	17.1	A	52.6	B	57.0	B	9.7	B	43.0	B	47.4	B
Government information or Internet services	20.8	A	80.9	B	56.5	B	37.4	B	43.5	B	19.1	B
Government support for training	24.5	A	52.6	B	78.9	B	31.5	B	21.1	B	47.4	B
Other	3.2	A	x	C	x	C	x	A	x	C	x	C
Machinery Manufacturing (excluding 3331 & 3332)												
% using any program	76.0	A	85.8	A	71.4	B	57.1	B	28.6	B	14.2	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	79.7	A	94.4	A	58.9	B	53.2	B	41.1	B	5.6	A
Government research and development grants	16.0	A	78.8	B	58.2	B	37.0	B	41.8	B	21.2	B
Government venture capital support	2.9	A	33.1	C	76.8	C	9.9	C	23.2	C	66.9	C
Government technology support and assistance programs	15.5	A	52.5	B	68.0	B	20.6	B	32.0	B	47.5	B
Government information or Internet services	12.3	A	65.0	B	77.2	B	42.2	C	22.8	B	35.0	B
Government support for training	36.9	B	31.7	B	84.7	B	16.4	B	15.3	B	68.3	B
Other	4.2	A	82.5	B	17.5	B	0.0	A	82.5	B	17.5	B

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.2

Use of Government Support Programs During the Period 1997-1999

Canada, Innovators in Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By:									
			Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Computer and Peripheral Equipment Manufacturing												
% using any program	79.1	B	100.0	A	54.4	B	54.4	B	45.6	B	0.0	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	80.9	B	100.0	A	56.4	B	56.4	B	43.6	B	0.0	A
Government research and development grants	28.9	B	52.5	C	89.8	A	42.4	C	10.2	A	47.5	C
Government venture capital support	0.0	A	-	-	-	-	-	-	-	-	-	-
Government technology support and assistance programs	18.1	B	x	A	x	C	x	C	x	C	x	A
Government information or Internet services	15.4	B	x	A	x	C	x	C	x	C	x	A
Government support for training	44.1	B	70.0	B	63.3	B	33.3	B	36.7	B	30.0	B
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Communications Equipment Manufacturing												
% using any program	81.1	A	93.9	A	77.2	A	71.1	A	22.8	A	6.1	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	98.0	A	93.7	A	72.4	A	66.2	A	27.6	A	6.3	A
Government research and development grants	41.8	B	100.0	A	10.2	B	10.2	B	89.8	B	0.0	A
Government venture capital support	8.8	A	x	C	x	C	x	A	x	C	x	C
Government technology support and assistance programs	18.6	B	89.0	B	33.8	C	22.8	B	66.2	C	11.0	B
Government information or Internet services	20.1	B	89.8	B	52.5	C	42.4	C	47.5	C	10.2	B
Government support for training	36.1	B	39.7	B	78.1	B	17.9	B	21.9	B	60.3	B
Other	2.2	A	x	A	x	A	x	A	x	A	x	A
Audio and Video Equipment Manufacturing												
% using any program	x	A	x	A	x	A	x	A	x	A	x	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	x	A	x	A	x	A	x	A	x	A	x	A
Government research and development grants	x	A	x	A	x	A	x	A	x	A	x	A
Government venture capital support	x	A	-	-	-	-	-	-	-	-	-	-
Government technology support and assistance programs	x	A	x	A	x	A	x	A	x	A	x	A
Government information or Internet services	x	A	-	-	-	-	-	-	-	-	-	-
Government support for training	x	A	x	A	x	A	x	A	x	A	x	A
Other	x	A	-	-	-	-	-	-	-	-	-	-

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.2

Use of Government Support Programs During the Period 1997-1999

Canada, Innovators in Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By: Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Semiconductor and Other Electronic Equipment Manufacturing												
% using any program	73.7	B	94.2	A	72.4	B	66.6	B	27.6	B	5.8	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	91.1	A	100.0	A	63.1	B	63.1	B	36.9	B	0.0	A
Government research and development grants	22.1	B	x	A	x	C	x	C	x	C	x	A
Government venture capital support	23.4	B	x	C	x	A	x	C	x	A	x	C
Government technology support and assistance programs	32.3	B	27.1	C	81.9	B	9.0	B	18.1	B	72.9	C
Government information or Internet services	9.1	A	x	A	x	C	x	C	x	C	x	A
Government support for training	38.3	B	35.2	B	100.0	A	35.2	B	0.0	A	64.8	B
Other	0.0	A	-	-	-	-	-	-	-	-	-	-
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media												
% using any program	74.7	A	91.1	A	86.9	A	78.0	A	13.1	A	8.9	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	92.3	A	94.7	A	70.5	A	65.3	A	29.5	A	5.3	A
Government research and development grants	37.9	B	63.1	B	71.9	B	35.0	B	28.1	B	36.9	B
Government venture capital support	11.2	B	60.5	C	75.3	C	...	D	24.7	C	39.5	C
Government technology support and assistance programs	22.2	B	44.3	B	71.7	B	16.0	B	28.3	B	55.7	B
Government information or Internet services	18.7	A	93.3	A	34.0	C	27.3	C	66.0	C	6.7	A
Government support for training	32.7	B	37.1	B	92.7	A	29.8	B	7.3	A	62.9	B
Other	1.1	A	x	A	x	A	x	A	x	A	x	A
Electrical Equipment, Appliance and Component Manufacturing												
% using any program	74.1	A	86.5	A	70.5	B	57.0	B	29.5	B	13.5	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	78.9	A	96.4	A	50.5	B	46.9	B	49.5	B	3.6	A
Government research and development grants	20.4	A	89.6	A	39.5	B	29.1	B	60.5	B	10.4	A
Government venture capital support	5.4	A	x	C	x	B	x	B	x	B	x	C
Government technology support and assistance programs	18.9	A	50.3	B	57.8	B	8.1	A	42.2	B	49.7	B
Government information or Internet services	18.4	A	92.3	A	65.3	B	57.6	B	34.7	B	7.7	A
Government support for training	39.4	B	54.3	B	91.6	A	45.9	B	8.4	A	45.7	B
Other	2.5	A	x	A	x	D	x	D	x	D	x	A

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.2

Use of Government Support Programs During the Period 1997-1999

Canada, Innovators in Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By:									
			Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Motor Vehicle Manufacturing + Motor Vehicle Body and Trailer Manufacturing + Motor Vehicle Parts Manufacturing												
% using any program	62.1	B	90.1	A	73.5	B	63.6	B	26.5	B	9.9	A
Of these, % using the following programs:												
Research and development (R&D) tax credits	82.9	B	93.4	A	68.2	B	61.6	B	31.8	B	6.6	A
Government research and development grants	18.3	B	89.6	B	25.5	B	15.1	B	74.5	B	10.4	B
Government venture capital support	3.5	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	18.3	A	83.5	B	31.9	B	15.4	B	68.1	B	16.5	B
Government information or Internet services	27.0	B	80.3	B	74.9	B	55.2	B	25.1	B	19.7	B
Government support for training	36.0	B	38.3	B	83.2	B	21.5	B	16.8	B	61.7	B
Other	3.0	A	x	D	x	D	x	D	x	D	x	D
Aerospace Product and Parts Manufacturing												
% using any program	81.1	B	77.1	B	82.2	B	59.3	B	17.8	B	22.9	B
Of these, % using the following programs:												
Research and development (R&D) tax credits	58.5	B	91.3	B	64.8	B	56.1	B	35.2	B	8.7	B
Government research and development grants	25.1	B	90.3	B	57.5	B	47.9	C	42.5	B	9.7	B
Government venture capital support	11.1	A	x	C	x	B	x	C	x	B	x	C
Government technology support and assistance programs	31.0	B	92.1	B	55.7	B	47.8	B	44.3	B	7.9	B
Government information or Internet services	23.1	B	89.5	B	40.4	C	29.9	C	59.6	C	10.5	B
Government support for training	61.4	B	34.9	B	82.6	B	17.6	B	17.4	B	65.1	B
Other	11.6	A	x	C	x	C	x	A	x	C	x	C
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment												
% using any program	73.9	B	85.1	B	78.0	B	63.1	B	22.0	B	14.9	B
Of these, % using the following programs:												
Research and development (R&D) tax credits	73.5	B	89.9	B	48.3	B	38.3	B	51.7	B	10.1	B
Government research and development grants	12.5	A	x	C	x	B	x	C	x	B	x	C
Government venture capital support	0.0	A	-	-	-	-	-	-	-	-	-	-
Government technology support and assistance programs	16.3	B	x	C	x	C	x	A	x	C	x	C
Government information or Internet services	41.6	B	59.3	C	80.0	B	39.3	C	20.0	B	40.7	C
Government support for training	37.7	B	33.3	C	93.8	C	27.1	B	6.2	C	66.7	C
Other	4.7	B	x	D	x	D	x	A	x	D	x	D

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Table 29.2

Use of Government Support Programs During the Period 1997-1999

Canada, Innovators in Manufacturing

	% Using a Program		Of These, % Using Programs Sponsored By:									
			Federal Government		Provincial Governments		Both Federal and Provincial		Federal Government Only		Provincial Governments Only	
	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability	Percent	Reliability
Furniture and Related Products Manufacturing												
% using any program	51.6	A	75.8	B	66.5	B	42.3	B	33.5	B	24.2	B
Of these, % using the following programs:												
Research and development (R&D) tax credits	51.5	B	93.4	A	48.2	B	41.6	B	51.8	B	6.6	A
Government research and development grants	15.1	A	92.8	B	15.6	B	8.4	B	84.4	B	7.2	B
Government venture capital support	3.5	A	x	A	x	A	x	A	x	A	x	A
Government technology support and assistance programs	13.5	A	40.1	C	83.0	C	23.1	B	17.0	C	59.9	C
Government information or Internet services	11.9	A	95.5	B	38.9	C	34.3	C	61.1	C	4.5	B
Government support for training	44.1	B	34.3	B	81.9	B	16.3	B	18.1	B	65.7	B
Other	9.0	A	63.8	C	47.0	C	10.8	A	53.0	C	36.2	C
Miscellaneous Manufacturing												
% using any program	86.8	B	69.0	B	73.5	B	42.6	B	26.5	B	31.0	B
Of these, % using the following programs:												
Research and development (R&D) tax credits	53.3	B	86.9	B	65.7	B	52.5	B	34.3	B	13.1	B
Government research and development grants	22.5	B	72.1	B	38.5	B	10.6	B	61.5	B	27.9	B
Government venture capital support	8.5	A	x	C	x	C	x	A	x	C	x	C
Government technology support and assistance programs	9.6	A	79.8	C	65.6	C	45.4	C	34.4	C	20.2	C
Government information or Internet services	26.1	B	55.5	B	74.0	C	29.5	B	26.0	C	44.5	B
Government support for training	42.1	B	23.9	B	88.6	B	12.5	B	11.4	B	76.1	B
Other	1.6	A	x	D	x	D	x	A	x	D	x	D

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999

Interpretative Notes
Question 30

There are no tabulations for this question. It was a written response and will be analysed later.

ELECTRONIC PUBLICATIONS AVAILABLE AT
www.statcan.ca

Annex 2: Questionnaire

ELECTRONIC PUBLICATIONS AVAILABLE AT

www.statcan.ca

Science, Innovation and Electronic
Information Division

Survey of Innovation 1999

Si vous préférez recevoir ce questionnaire en français, veuillez cocher ☐

Confidential when completed

Correct pre-printed information if necessary using the corresponding boxes provided below.

Legal Name

Business Name

C / O

No. & Street

City

Province

Postal Code

Contact

Téléphone no.
Area code
Extension

Facsimile no.
Area code

Survey Purpose

The information you provide is essential to assure the availability of pertinent information on innovation. The information compiled from the survey can be used by firms for market analysis, by trade associations to study performance and other characteristics of their industries, and by government to develop national and regional economic policies.

Authority

This survey is conducted under the authority of the Statistics Act, Revised Statutes of Canada, Chapter S19. Completion of this questionnaire is a legal requirement under the Statistics Act.

Confidentiality

Statistics Canada is prohibited by law from publishing any statistics which would divulge information obtained from this survey that relates to any identifiable firm without the previous consent of that firm. The data reported in this questionnaire will be treated in strict confidence, used for statistical purposes and published in aggregate form only. Statistics Canada will create a data base combining individual survey responses with existing Statistics Canada data records. The confidentiality provisions of the Statistics Act are not affected by either the Access to Information Act or any other legislation.

Federal-Provincial Agreement

In order to avoid duplication of enquiry, to reduce the cost of collection and to provide consistent statistics, an agreement has been made with the Bureau de la Statistique du Québec, under Section 11 of the Statistics Act, Statutes of Canada, where data on firms located or operating in Québec will be transmitted to the Bureau de la Statistique du Québec. The Statistics Act of Québec includes the same provisions for confidentiality and penalties for disclosure of information as the Federal Statistics Act.

In this questionnaire, **"firm"** refers to the legal entity that owns your plant or establishment which operates in Canada.

Statistics Canada Statistique Canada

Canada

Competitive Environment

1. For your firm, how strongly do you agree or disagree with each of the following statements?

Please indicate your opinion by using the following scale where 1 is strongly disagree and 5 is strongly agree. Check 0 if not relevant to your firm.

	Strongly Disagree				**Strongly agree**	**Not Relevant**
	1	**2**	**3**	**4**	**5**	**0**
a. My client's demands are easy to predict	1○	2○	3○	4○	5○	0○
b. My clients can easily substitute my products (goods or services) for the products of my competitors	1○	2○	3○	4○	5○	0○
c. My competitors' actions are easy to predict	1○	2○	3○	4○	5○	0○
d. The arrival of new competitors is a constant threat	1○	2○	3○	4○	5○	0○
e. The arrival of competing products (goods or services) is a constant threat	1○	2○	3○	4○	5○	0○
f. My firm can easily replace its current suppliers	1○	2○	3○	4○	5○	0○
g. It is difficult to hire qualified staff and workers	1○	2○	3○	4○	5○	0○
h. It is difficult to retain qualified staff and workers	1○	2○	3○	4○	5○	0○
i. My products (goods or services) quickly become obsolete	1○	2○	3○	4○	5○	0○
j. Production technologies change rapidly	1○	2○	3○	4○	5○	0○
k. Office technologies change rapidly	1○	2○	3○	4○	5○	0○

Firm Success Factors

2. Please rate the importance of each of the following factors for the success of your firm.

Please indicate your opinion by using the following scale where 1 is low importance and 5 is high importance. Check 0 if not relevant to your firm.

	Low		Importance		High	Not Relevant
	1	2	3	4	5	0
Markets and Products						
a. Seeking new markets	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
b. Satisfying existing clients	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
c. Developing niche or specialized markets	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
d. Developing export markets	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
e. Promoting firm or product (good or service) reputation	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
f. Providing after-hour client support services	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
Human Resources						
g. Hiring new graduates from universities	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
h. Hiring new graduates from technical schools and colleges	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
i. Hiring experienced employees	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
j. Recruiting skilled people from outside of Canada	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
k. Training employees	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
l. Using teams within your firm which bring together people with different skills	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
Other						
m. Performing research and development within your firm	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
n. Involvement in collaboration and cooperation with other firms	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
o. Developing new products (goods or services) and processes	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
p. Active involvement in developing new industry-wide standards	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○

New and Significantly Improved Products and Processes

3. A **new product (good or service)** is a product which is new to your firm whose characteristics or intended uses differ significantly from those of your firm's previously produced products.

A **significantly improved product (good or service)** is an existing product whose performance has been significantly enhanced or upgraded. A complex product which consists of a number of components or integrated subsystems may be improved by partial changes to one of the components or subsystems. Changes to your firm's existing products which are purely aesthetic or which only involve minor modifications are not to be included.

During the last three years, 1997 to 1999, did your firm offer new or significantly improved **products (goods or services)** to your clients?

1○ Yes ↓   3○ No → *Go to Question 4*

If yes, please indicate how many new or significantly improved products were offered in the **last three years, 1997 to 1999**?

Please check the appropriate number.

1○ 1-2	4○ 11-20
2○ 3-5	5○ 21-50
3○ 6-10	6○ More than 50

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4. **New production/manufacturing processes are processes** which are new to your firm. They involve the introduction into your firm of new production/manufacturing methods, procedures, systems, machinery or equipment which differs significantly from your firm's previous production/manufacturing processes.

Significantly improved production/manufacturing processes involve significant changes to your existing processes which may be intended to produce new or significantly improved products (goods or services) or production/manufacturing processes. Minor or routine changes to processes are not to be included.

During the last three years, 1997 to 1999, did your firm introduce **new or significantly improved production/manufacturing processes**?

1○ Yes   3○ No

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5. **During the last three years, 1997 to 1999**, did your firm have any unsuccessful or not yet completed projects to develop or introduce new or significantly improved products (goods or services) or production/manufacturing processes?

1○ Yes   3○ No

6. **During the last three years, 1997 to 1999**, did your firm engage in the following activities which are linked to offering new or significantly improved products (goods or services) or to introducing new or significantly improved production/manufacturing processes?

	Yes	No
a. Research and development (R&D) linked to new or significantly improved products (goods or services) or production/manufacturing processes	1 ○	3 ○
b. Acquisition of machinery, equipment or other technology linked to new or significantly improved products (goods or services) or production/manufacturing processes	1 ○	3 ○
c. Industrial engineering and industrial design linked to new or significantly improved products (goods or services) or production/manufacturing processes	1 ○	3 ○
d. Tooling up and production start-up linked to new or significantly improved products (goods or services) or production/manufacturing processes	1 ○	3 ○
e. Training linked to the introduction of new or significantly improved products (goods or services) or production/manufacturing processes	1 ○	3 ○

If all answers to Questions 3 to 6 are "no", please proceed to Question 7.

If at least one answer to Questions 3 to 6 is "yes", please proceed to Question 8.

7. Why did your firm **not** develop or introduce new or significantly improved products (goods or services) or production/manufacturing processes **during the last three years, 1997 to 1999**?

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Please proceed to Question 21.

Sources of Information

8. Which of the following played an **important role** as sources of information needed for suggesting or contributing to the development of new or significantly improved products (goods or services) or production/manufacturing processes, **during the last three years, 1997 to 1999**?

Please check all that apply.

INTERNAL sources of information to your firm:

1 ○ Research and development (R&D) staff
2 ○ Marketing staff
3 ○ Production staff
4 ○ Management staff
5 ○ Other (*please specify*): ______________________

____

Conclusion

8. Which of the following played an **important role** as sources of information needed for suggesting or contributing to the development of new or significantly improved products (goods or services) or production/manufacturing processes, **during the last three years, 1997 to 1999**.

Please check all that apply.

EXTERNAL sources of information to your firm:

6 ○ Related firms in your corporate group (e.g. parent or subsidiary)
7 ○ Suppliers of equipment, material and components
8 ○ Clients
9 ○ Competitors
10 ○ Consultancy firms
11 ○ Universities and colleges
12 ○ Federal government agencies and research laboratories (e.g. National Research Council of Canada)
13 ○ Provincial agencies and research laboratories

Generally available sources of information

14 ○ Trade fairs and exhibitions
15 ○ Internet or computer based information networks
16 ○ Professional conferences, meetings and publications

Other sources of information

17 ○ *Please specify:* ______________________________

18 ○ None of the above

Objectives

9. Please indicate the main reasons why your firm offered new or significantly improved products (goods or services) or introduced new or significantly improved production/manufacturing processes **during the last three years, 1997 to 1999**.

Please indicate the degree of importance attached to each objective by using the following scale where 1 is low importance and 5 is high importance. Check 0 if not relevant to your firm.

	Low		Importance		High	Not Relevant
	1	2	3	4	5	0
Productivity						
a. To reduce your labour costs	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
b. To increase production capacity	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
c. To reduce production time	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
d. To improve production flexibility	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
Product						
e. To extend product range	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
f. To improve product quality	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
g. To increase speed of delivering products to the market	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
h. To replace products being phased out	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○

Conclusion

9. Please indicate the main reasons why your firm offered new or significantly improved products (goods or services) or introduced new or significantly improved production/manufacturing processes **during the last three years, 1997 to 1999**.

Please indicate the degree of importance attached to each objective by using the following scale where 1 is low importance and 5 is high importance. Check 0 if not relevant to your firm.

	Low	Importance			High	Not Relevant
	1	2	3	4	5	0
Other						
i. To reduce materials consumption	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
j. To reduce environmental damage	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
k. To reduce energy consumption	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
l. To deal with or to respond to new government regulations	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○

Problems and Obstacles

10. Which of the following slowed down or caused problems for your firm when it developed new or significantly improved products (goods or services) or introduced new or significantly improved production/manufacturing processes **during the last three years, 1997 to 1999**?

Please check all that apply.

1 ○ High cost of developing new or significantly improved products or processes

2 ○ Inability to devote staff to projects to develop new or significantly improved products or processes on an on-going basis because of production requirements

3 ○ Inability to qualify for government assistance programs or research and development (R&D) tax credits

4 ○ Lack of skilled personnel to develop or introduce new or significantly improved products or processess

5 ○ Lack of financing for the development or introduction of new or significantly improved products or processes

6 ○ Lack of marketing capability to market new or significantly improved products

7 ○ Lack of information on technology relevant to the development or introduction of new or significantly improved products or processes

8 ○ Lack of external technical support services required to develop or introduce new or significantly improved products or processes

9 ○ Lack of access to expertise in universities that could assist in developing or introducing new or significantly improved products or processes

10 ○ Lack of access to expertise in government laboratories that could assist in developing or introducing new or significantly improved products and/or processes

11 ○ Lack of cooperation with other firms

Conclusion

10. Which of the following slowed down or caused problems for your firm when it developed new or significantly improved products (goods or services) or introduced new or significantly improved production/manufacturing processes **during the last three years, 1997 to 1999**?

Please check all that apply.

12 ○ Lack of customer responsiveness to new products

13 ○ Organizational rigidities in your firm which prevent the development or introduction of new or significantly improved products or processes

14 ○ Government regulations affecting new or significantly improved products or processes

15 ○ Other *(please specify)*:

____

____

____

11. Please provide a concrete example of the most significant problem or obstacle your firm encountered when developing new or significantly improved products (goods or services) or production/manufacturing processes **during the last three years, 1997 to 1999**.

____

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Impact

12. Did your firm introduce any new or significantly improved products **during the last three years, 1997 to 1999**?

1 ○ Yes ↓ 3 ○ No → *Go to Question 13*

If yes, please estimate the percentage of your sales in 1999 (to date) that resulted from new or significantly improved products (goods or services) introduced by your firm **during the last three years, 1997 to 1999**. Please refer to definitions of new and significantly improved products (goods or services) in Question 3.

Please check the appropriate circles.

	1 % to 5 %	6 % to 15 %	16 % to 25 %	26 % to 50 %	51 % to 75 %	76 % to 100 %
Sales in 1999 from new products (goods or services) introduced between 1997 and 1999	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○
Sales in 1999 from significantly improved products (goods or services) introduced between 1997 and 1999	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○

13. What impact did new and significantly improved products (goods or services) and new significantly improved production/manufacturing processes developed and introduced **during the last three years, 1997 to 1999** have on your firm?

Please indicate your opinion by using the following scale where 1 is strongly disagree and 5 is strongly agree. Check 0 if not relevant to your firm.

	Strongly Disagree **1**	**2**	**3**	**4**	**Strongly Agree** **5**	**Not Relevant** **0**
a. Increased the productivity of your firm	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
b. Increased the profitability of your firm	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
c. Increased the speed of supplying and/or delivering your products (goods or services)	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
d. Increased your firm's ability to adapt flexibly to different client demands	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
e. Increased your firm's domestic market share	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
f. Increased your firm's international market share	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
g. Allowed your firm to maintain its profit margins	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○
h. Allowed your firm to keep up with its competitors	1 ○	2 ○	3 ○	4 ○	5 ○	0 ○

Cooperative and Collaborative Arrangements

14. **Cooperative and collaborative arrangements** involve the active participation in joint projects between your firm and other firms or organizations in order to develop new or significantly improved products (goods or services) and/or production/manufacturing processes. Pure contracting-out work, where there is no active participation, is not regarded as collaboration or cooperation.

Was your firm involved in cooperative and collaborative arrangements with other firms or organizations to develop new or significantly improved products (goods or services) or production/manufacturing processes **during the last three years, 1997 to 1999**?

1 ○ Yes ↓

3 ○ No → *Go to Question 17*

If yes, please indicate which of the following reasons are important in determining the involvement of your firm in cooperative and collaborative arrangements to develop new or significantly improved products (goods or services) and/or production/manufacturing processes **during the last three years, 1997 to 1999**?

1 ○ Sharing costs

2 ○ Spreading risk

3 ○ Accessing research and development R&D

4 ○ Prototype development

5 ○ Scaling-up production processes

6 ○ Accessing critical expertise

7 ○ Accessing new markets

8 ○ Accessing new distribution channels

9 ○ Other *(please specify)*: ______________________

15. If your firm has **more than one Canadian location**, please proceed to **Question 16**.

If your firm has **only one Canadian location**, please indicate the location of other firms and organizations with which your firm had cooperative and collaborative arrangements to develop new or significantly improved products (goods or services) and production/manufacturing processes **during the last three years, 1997 to 1999**.

Please check the appropriate circles.	**Within 100 km**	**In the rest of your province**	**In the rest of Canada**	**US**	**Europe**	**Pacific Rim**	**Other**
a. Competitors	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
b. Clients	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
c. Consulting firms	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
d. Suppliers	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
e. Federal government research institutes (e.g. National Research Council of Canada)	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
f. Provincial government research institutes	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
g. Universities	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
h. Other	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○

↓

Please specify: ______________________________

Please proceed to Question 17.

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16. If your firm has **more than one Canadian location**, please check the location of other firms and organizations with which your firm had cooperative and collaborative arrangements to develop new or significantly improved products (goods or services) and production/manufacturing processes **during the last three years, 1997 to 1999**.

Please check the appropriate circles.	**Canada**	**US**	**Europe**	**Pacific Rim**	**Other**
a. Competitors	1 ○	2 ○	3 ○	4 ○	5 ○
b. Clients	1 ○	2 ○	3 ○	4 ○	5 ○
c. Consulting firms	1 ○	2 ○	3 ○	4 ○	5 ○
d. Suppliers	1 ○	2 ○	3 ○	4 ○	5 ○
e. Federal government institutes (e.g. National Research Council of Canada)	1 ○	2 ○	3 ○	4 ○	5 ○
f. Provincial government research institutes	1 ○	2 ○	3 ○	4 ○	5 ○
g. Other firms within your corporate group (e.g. parent or subsidiary)	1 ○	2 ○	3 ○	4 ○	5 ○
h. Universities	1 ○	2 ○	3 ○	4 ○	5 ○
i. Other	1 ○	2 ○	3 ○	4 ○	5 ○

↓

Please specify: ______________________________

The Most Important New or Significantly Improved Product or Process

17. Please provide below a brief description of your **most important** new or significantly improved product (good or service) or production/manufacturing process **during the last three years, 1997 to 1999**.

____

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____

____

18. Was this most important new or significantly improved product (good or service) or production/manufacturing process:

	Yes	No	Do not know
a. a world first?	1 ○	3 ○	N ○
b. a first in Canada?	1 ○	3 ○	N ○
c. a first for your firm?	1 ○	3 ○	N ○

19. How long did it take from initial idea generation to the implementation of this most important new or significantly improved product (good or service) or production/manufacturing process?

☐☐ years ☐☐ months

20. Did this most important new or significantly improved product (good or service) or production/manufacturing process involve:

	Yes	No	Do not know
a. The use of new materials?	1 ○	3 ○	N ○
b. An investment in machinery or equipment?	1 ○	3 ○	N ○
c. New software developed by or specifically for your firm?	1 ○	3 ○	N ○

Building and Construction Products

21. **During the last three years, 1997 to 1999**, did your firm offer products which were **incorporated into** buildings and other engineering works such as roads, dams, bridges, sewers, transmission lines and pipelines? Some examples of building products are windows, plaster board, bricks, concrete, heating and plumbing systems, roofing, security systems, electrical systems and others.

1 ○ Yes ↓ 2 ○ No → *Please go to Question 22*

If yes, please estimate the percentage of your total sales from these products, **during the last three years, 1997 to 1999**.

Please check the appropriate circle.

1 % to 5 %	6 % to 15 %	16 % to 25 %	26 % to 50 %	51 % to 75 %	76 % to 100 %	Do not know
1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	N ○

22. **During the last three years, 1997 to 1999**, did your firm offer machinery, equipment or tools which were **used during the process** of constructing buildings and other engineering works such as roads, dams, bridges, sewers, transmission lines, and pipelines? Some examples of products used during construction are bulldozers, cranes, power tools, scaffolding, survey equipment and others.

1○ Yes ↓ 3○ No → *Go to Question 23*

If yes, please estimate the percentage of your total sales from these products, **during the last three years, 1997 to 1999**.

Please check the appropriate circle.

1 % to 5 %	6 % to 15 %	16 % to 25 %	26 % to 50 %	51 % to 75 %	76 % to 100 %	Do not know
1○	2○	3○	4○	5○	6○	N○

Natural Resource Products

23. Are your products used by natural resource industries?

1○ Yes ↓ 3○ No → *Go to Question 24*

If yes, please estimate the percentage of your total sales of products (goods or services) that were used by the following natural resources industries, **during the last three years, 1997 to 1999**.

Please check the appropriate circles.

	1 % to 5 %	6 % to 15 %	16 % to 25 %	26 % to 50 %	51 % to 75 %	76 % to 100 %	Do not know
a. Mining industry	1○	2○	3○	4○	5○	6○	N○
b. Logging and forestry industries	1○	2○	3○	4○	5○	6○	N○
c. Oil and gas extraction industries	1○	2○	3○	4○	5○	6○	N○
d. Electrical utilities	1○	2○	3○	4○	5○	6○	N○

Research and Development, Intellectual Property and Human Resources

24. **During the past three years, 1997 to 1999**, did your firm undertake research and development (R&D) activities?

1○ Yes ↓ 3○ No → *Go to Question 25*

If yes,

	Yes	No
Is research and development (R&D) carried out in your firm by a separate and distinct research and development (R&D) department?	1○	3○
Is research and development (R&D) contracted out to other firms?	1○	3○

If yes, please indicate if the research and development (R&D) was performed ↓

1○ continuously

2○ occasionally

25. Please indicate which of the following methods have been used by your firm to protect its intellectual property **during the past three years, 1997 to 1999**.

	Yes	No
a. Patents	1○	3○
b. Trademarks	1○	3○
c. Copyrights	1○	3○
d. Confidentiality agreementsé	1○	3○
e. Trade secrets	1○	3○

h. Other (*please specify*): ____________________

26. Did your firm apply for at least one patent **during the last three years, 1997 to 1999**?

1○ Yes ↓ 3○ No → *Go to Question 27*

If yes, how many patents did your firm apply for **during the last three years, 1997 to 1999**?

Number in Canada ☐☐

Number in United States ☐☐

27. How many people does your firm currently employ?

Number of employees ☐☐☐☐

28. **During the last three years, 1997 to 1999**, has the total number of employees in your firm

- 1 ○ increased?
- 2 ○ decreased?
- 3 ○ remained the same?

Government Support Programs

29. Has your firm used any of the following types of programs sponsored by the federal government or a provincial government **during the last three years, 1997 to 1999**?

Please check the appropriate circles.

	Government Programs		Did not use a government program
	Federal Government	Provincial Government	
a. Research and development (R&D) tax credits	1 ○	2 ○	3 ○
b. Government research and development (R&D) grants	1 ○	2 ○	3 ○
c. Government venture capital support	1 ○	2 ○	3 ○
d. Government technology support and assistance programs	1 ○	2 ○	3 ○
e. Government information or Internet services	1 ○	2 ○	3 ○
f. Government support for training	1 ○	2 ○	3 ○

g. Other (*please specify*): ______________________________

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Comments

30. In your view, what can be done to improve the ability of Canadian firms to develop new and significantly improved products (goods or services) or production/manufacturing processes?

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Thank you for your co-operation.

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